Pyramix

DIGITAL AUDIO WORKSTATION

Quickstart Guide

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Merging Technologies
Le Verney 1070 Puidoux Switzerland
Tel: +41 21 946 04 44 • Fax: +41 21 946 04 45
www.merging.com

Contents

Contents 3
Welcome to Pyramix Virtual Studio! 7
Introduction 7
Overview 7
Pyramix documentation and Help 7
Conventions 8
Native, Card and Software Set or Pyramix Turnkey? 8
Pyramix Versions 8
MassCore™ 9
NEW USERS START HERE 9
System Requirements For Pyramix Virtual Studio 9
Installing Pyramix Virtual Studio Hardware 10
Mykerinos Board Installation 10
Multi-board installation 11
Pyramix Virtual Studio Board I/O 11
Time Code and Video Sync Option 11
Cabling Pyramix in your System Environment 12
Digital Audio Synchronization and TimeCode 12
Installing Pyramix Virtual Studio Software 13
Installation Overview: 13
Driver Signing 14
Running the Installer 14
Authorization System 15
Enabling Pyramix Virtual Studio with your Software Key 15
First launch 16
Starting Pyramix Virtual Studio 17
Pyramix User Interface 18
Mouse Modifier Keys 18
Context Menus 18
Keyboard Shortcuts 18
Macros 18
Pyramix Concepts 18
Project 18
Mixer 19
Monitor 19
Meter Bridge 19
Composition 20
Timeline 20
EDL 20
Media Files 20
Master Clips 20

Clips 20
Media Management - Housekeeping 20
Media Drives and Folders 20
Libraries 21
User Libraries 21
Automation in libraries 22
Global Libraries 22
Project Libraries 22
Offline / Reference Libraries 22
A First Simple Project 23
Start Pyramix 23
Connect Physical I/O to Logical I/O 23
Open a New Project 24
Configure the Mixer 26
Before Recording 27
Record and Playback Audio 27
Edit Audio 29
Starting a New Project 30
Project Templates 30
New Project from scratch 30
Pyramix Virtual Studio Window Orientation 33
Settings 34
Recording 36
Recording Audio into a Pyramix Virtual Studio Project 36
Virtual Multi-track 37
Dubbing Mode 39
The Timeline 39
Tracks 39
Clips and Compositions 40
Editing 41
Clips in a Composition on the Timeline 41
Selecting a Range 41
Making Edits 41
Fades 42
Edit Command highlights: 42
Navigation 43
Time Scale Rulers 44
Cursor & Timescale Ruler Toolbars 45
Cursor Toolbar 45
Jog / Shuttle 47
Transport Controls 48
Scroll Wheel 49
The Overview 50
Markers or User Flags 50
Using the Mixer 51
Mixer Components 51
Show / Hide 51

Creating and Configuring Mixers 52
I/O Busses Explained 52
Internal Return Busses 52
Input Strips 52
Groups 52
Mixing/Monitoring/Aux Buses 52
External Effects 54
Configuring a Blank or Existing Mixer 54
Synchronized Creation/Deletion of Tracks/Strips 54
Adding Strips 54
Mixer I/O Assignments 55
Adding Plug-ins 55
Mixer Surround Components 56
Strip and Bus Tools - Plug-ins 57
Eq, Comp/Limiter/Expander 57
Bus Tools 66
Simple Mixer Automation 67
Mixing Down Projects 67
Exporting a Composition to a File 67
Archiving Projects 67
CD Mastering 67
Quick CD 67
CD Markers 70
Exporting Projects to CD Image Files 71
Burning a CD-R 72
Customizing the User Interface 73
Workspaces 73
Keyboard Shortcuts 73
User Macros 74
Appendix I Mouse Modifier Keys 75
Main Editor 75
Overview 77
Notes 77
Media Folder 77
Appendix II I/O Daughter-card Options 78
Index 81

Quickstart Guide

Document: Pyramix™ Quickstart Guide 7 1

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Welcome to Pyramix Virtual Studio!

Introduction

Thank you!

Congratulations on your purchase of **Pyramix Virtual Studio**. More than just a product, this is a gateway to the future of sound recording, editing, mixing and mastering. You have joined a worldwide community of users who have already discovered the Pyramix advantage.

> **Note:** IMPORTANT! - The first thing you need to do is register your software to acquire your Pyramix key(s) and to be included in our user support list.

Please also subscribe to the User Forum at:

http://www.merging.com/forum/

Overview

VERY IMPORTANT!

We strongly recommend you consult the other Pyramix guides, the User Manual and other Guides for a more complete understanding of all the features and functions of Pyramix.

HOWEVER,

recognizing that most people do not read manuals until they have to, this shorter version will enable you to achieve (almost) instant gratification! This guide will introduce you to Pyramix Virtual Studio and lead you through a simple set-up, recording and importing audio, simple editing, mixing, adding effects, and CD recording.

Pyramix documentation and Help

ToolTips

Pyramix Software is equipped with 'ToolTips'. Hovering the mouse cursor over a tool icon pops-up a box with the name of the function. A longer description is shown bottom-left of the Pyramix program window.

Documentation

All the Pyramix documentation is in the Adobe Acrobat pdf format. (**.pdf** file extension)

In order to read the documentation you will need to have **Adobe Acrobat Reader V5** or later installed on your computer.

This **Quick Start Guide** and the **Pyramix User Manual** may be opened from the **Help** menu. Other documentation can be found in the Windows **Start** menu in **All Programs > Pyramix > Docs**. Please check for the most recent versions at:

http://www.merging.com

Support

If you cannot find an answer to a query in the documentation, please consult the on-line support at:

http://www.merging.com

where you will find answers to F.A.Q.s (Frequently Asked Questions) and further support.

Assumptions

This **Quick Start Guide** and the other Pyramix documentation assume you are thoroughly familiar with PCs and Windows terms and concepts. If self installing to a new PC new, please ensure the machine is working correctly before attempting to install Pyramix Virtual Studio.

Conventions

Conventions used in Pyramix documents:

Names found on Pyramix screens and menus are shown in bold. E.g. **Information & Settings**

Menu and sub-menu selections are shown like this:

View > Tracks > Show all Tracks

Which means:

Go to the **View** pull-down menu, mouse down to the **Tracks** sub-menu and choose **Show all Tracks**.

Where a dialog box has several **Pages**, **Tabs** are used to 'turn' the pages. **Tab page** selection is shown thus:

Settings > Keyboard Shortcut Editor : Active Machine

Which means:

Go to the **Settings** pull down menu, choose **Keyboard Shortcut Editor** then click on the **Active machine** tab.

The Pyramix **Settings > All Settings** dialog Has its own hierarchical tree structure in the left hand pane with folders leading to pages.

Native, Card and Software Set or Pyramix Turnkey?

Your **Pyramix Virtual Studio** will have been supplied in one of three forms:
Pyramix Native (or Media Bundle), Pyramix Card and Software Set or Pyramix Turnkey.

Pyramix Turnkey systems are complete, ready to go, rack-mounted PCs with the Pyramix Card and Software Set already installed and properly configured at the Merging Technologies factory. As such, no user installation or configuration is needed. You can connect audio sources and destinations (and sync and TimeCode if appropriate) and launch and run Pyramix immediately.

Pyramix Card and Software Set consists of the **Mykerinos** hardware and the **Pyramix** software **ONLY**. You must provide an appropriate computer platform and software environment in which to install the board and software, and install these yourself. Guidelines for an appropriate Pyramix system environment can be found in the following section.

Pyramix Native (or **Media Bundle**) comes with software and USB Security Key only. You must provide an appropriate computer platform and software environment, and install these yourself. Guidelines for an appropriate Pyramix system environment can be found in the following section.

Future Expansion is of course, possible, whether you start with **Turnkey** or a **Card and Software Set.**

Pyramix Versions

Pyramix Virtual Studio is a powerful and flexible Digital Audio Workstation (DAW) integrating hard disk recording and editing, digital audio mixing, effects processing, machine control, video, and CD-R mastering.

There are now several versions of Pyramix. Pyramix Native, Pyramix Native Media Bundle, Pyramix LE and Pyramix Virtual Studio Core. Numerous options and option packs are also available. This guide covers all versions of Pyramix and many optional functionalities and features.

> **Note:** Depending on the version and options purchased, some of the functions and features detailed in this manual may not be available in your version of Pyramix or may vary in capacity.

The **Pyramix** software runs Native, using the host CPU and soundcard and on the **Merging Technologies Mykerinos** hardware platform, depending on the version purchased. Each **Mykerinos** board is capable of up to 128 channels of 24-bit digital audio, 64 recording and 64 playback. External access to these 128 channels is determined by your choice of physical inputs and outputs to the **Mykerinos** board. In XDTDM mode the total number of **Live** inputs and outputs plus **Internal Busses** is 128 in and 128 out. In HDTDM mode these numbers are halved.

Pyramix Native

Pyramix Native offers 100% compatibility with the main Pyramix Virtual Studio (VS) system. Both the Pyramix Native and the Pyramix VS can be connected on the same standard Ethernet network and directly interchange audio and video media, or a Pyramix complete project between them.The Native software is USB dongle protected and runs on Windows 2000 or Windows XP desk-top or lap-top computers. It does have restrictions when compared with the main Pyramix Virtual Studio capabilities, as you would expect, but the Native software maintains all the real-time editing capabilities expected of a professional system.

MassCore™

MassCore™ is an extremely powerful Pyramix option. A truly deterministic real-time engine that does not rely on the Windows operating system. This avoids the inherent restrictions and latencies introduced by the operating system and allows the channel/track-count to be increased to an unprecedented level. **MassCore** is scalable from 16 to 256 input and output channels with a massive 256 channel bus structure.

MassCore™ enables a number of new features:

- Larger Mixer configurations
- Extra 2.66ms and Ultra 1.33ms latency options
- Full Delay Compensation (VS3 and VST)
- VST inserts on Buses and Auxes
- VST Multi-channel support
- External Inserts (physical effects)
- External Monitor Inputs and Talkback

Where features are **MassCore™** specific you will see the Masscore™ logo:

NEW USERS START HERE

Note: If you are a new user with a Pyramix Turnkey system, please go to **Cabling Pyramix in your System Environment on page 12**. If you are a new user with a card and software set, please start here:

System Requirements For Pyramix Virtual Studio

For recommended PC specifications please see the Pyramix Installation Guide and especially:

Support > Hardware Recommmendation : Recommended PC configuration

http://www.merging.com

- Sufficient HD space and speed for your audio media files. The speed and amount of disk space required depends on sample rate, bit depth, number of tracks and length of program material. A fast (10k rpm or better 15k rpm) SCSI drive (e.g. Seagate Cheetah) or a fast RAID array is recommended for larger multi-track projects, high sample rate and DSD work. Low cost SATA or IDE drives are fine for smaller projects of up to 24 channels.

- We recommend disks should be formatted as NTFS volumes.

Hard Disk Space Requirements

A complete software installation will require around 50MB of disk space for the **Pyramix** software itself and approximately 10MB of disk space for the **Virtual Transport**.

In addition, you will need hard disk storage for any captured audio media files. As a rule of thumb, one Gigabyte of disk storage equals:

- 185 track minutes at 44.1 kHz 16 bits
- 125 track minutes at 44.1 kHz 24 bits
- 170 track minutes at 48 kHz 16 bits
- 115 track minutes at 48 kHz 24 bits
- 55 track minutes at 96 kHz 24 bits

For continuous multi-track recording applications, divide total available mono track time by the number of tracks you will be using.

Please note that these are very rough estimates, and should be used only as a general indication of storage requirements.

Operating System

32 bit Windows 7 Professional, Windows Vista Business, or Windows XP Pro, installed. (Use Administrator User Account)

Power Management

N.B. As with all Digital Audio Workstations and Non-Linear Editors, we recommend setting the **PC** to an **Always On** Power management scheme. (**Start > Control Panel** double-click **Power Options.** Choose **Always On** from the **Power Schemes** combo box.) This allows the monitor to be turned off by the system but disables hard-disk turn off and Standby.

Note: The Mykerinos card is not designed to support Standby modes.

Other Applications

Like all Digital Audio Workstations, Pyramix works best when there are no other unnecessary applications or services running.

Video and Pyramix on one PC

To ensure a very smooth system (especially for seeking) playing video with Pyramix on the same computer, we recommend a Quad Processor PC, a dedicated hard drive for the video and Windows XP

Installing Pyramix Virtual Studio Hardware

Mykerinos Board Installation

Depending on whether you have a PCI or a PCIe board version, the Merging Technologies Mykerinos board can be installed in any free PCI or PCIe slot in your PC. In general, it is best **NOT** to install the board in the slot adjacent to an the graphics adapter; or in a PCI slot which may be physically shared with an ISA slot.
Please consult the:

www.merging.com

website for current compatibility information.

Make absolutely certain the PC power is **OFF** before installing the board!

With most of the current generation motherboards this means either the mains switch on the power supply or the power outlet switch. Where no switch is provided, either on the PC or the supply socket, then the PC should be unplugged.

Always observe proper static precautions when handling any PC boards! Use a static strap, and/or be sure to firmly ground yourself to the computer power supply, chassis or if the PC is unplugged, to a known good earth before handling and installing the **Mykerinos** board.

Some PCs have batteries, cables, jumpers, etc. which could prevent proper board seating in one or more slots. Make certain the board is firmly and fully seated before switching on.

Multi-board installation

Multiple boards must be installed in adjacent slots. To enable multi-board operation, all Mykerinos cards in the PC have to be connected together using a special HDTDM ribbon cable. This cable has to be plugged into the multi-pin connectors located on the top edge of the I/O daughter cards. Please contact your Merging Technologies dealer for information on how to order this HDTDM ribbon cable.

HDTDM/XDTDM

The HDTDM board linking cable has the following functions in a multiple Mykerinos board installation:

a) synchronization (to 1/512th of an audio sample accuracy) This enables Pyramix to "see" a single system comprised of a large pool of DSP power and I/O resources spread over separate cards.

b) transfers all audio signals (Live Inputs, Internal Send/Return Busses, Mix busses, Aux busses, Live Outputs, etc. between all the Mykerinos I/O daughter-cards which comprise the multi-board system.

Pyramix Virtual Studio Board I/O

Audio I/O Options

Mykerinos is a modular board which can have any one of several optional audio I/O daughter cards attached. When ordering Pyramix Virtual Studio from Merging Technologies or one of its distributors, be sure to specify the daughter card appropriate to your specific needs. (**Please see Appendix II I/O Daughter-card Options on page 78**)

On-board Analog Audio I/O

Regardless of which I/O daughter card is chosen, you can simultaneously use the 3.5mm stereo mini-phone jack on the Mykerinos board as an unbalanced, analog stereo audio monitor output for all projects up to 384 kHz, with levels programmable from within the Pyramix software. Sources at sample rates higher than 96 kHz are automatically Sample Rate Converted to 96 kHz, 24 bit. This stereo mini-jack connection may be connected to headphones or to a line level audio monitor input.

External Audio D/A-A/D Converter Boxes

Most of the I/O options for the Mykerinos board are digital. Pyramix will often be used with external audio D/A (for playback) and A/D (for recording) converters. Many such converters are available from Merging Technologies as options: for example, the **Merging Technologies Dua II** and **Sphynx 2**. Contact your local Merging Technologies Sales representative for more information.

Capabilities of third party A/D - D/A converter boxes are widely variable. Please check with the manufacturer to ascertain which sample rates, word lengths and number of I/O channels are supported. You will need this information later to appropriately configure the Pyramix software.

Time Code and Video Sync Option

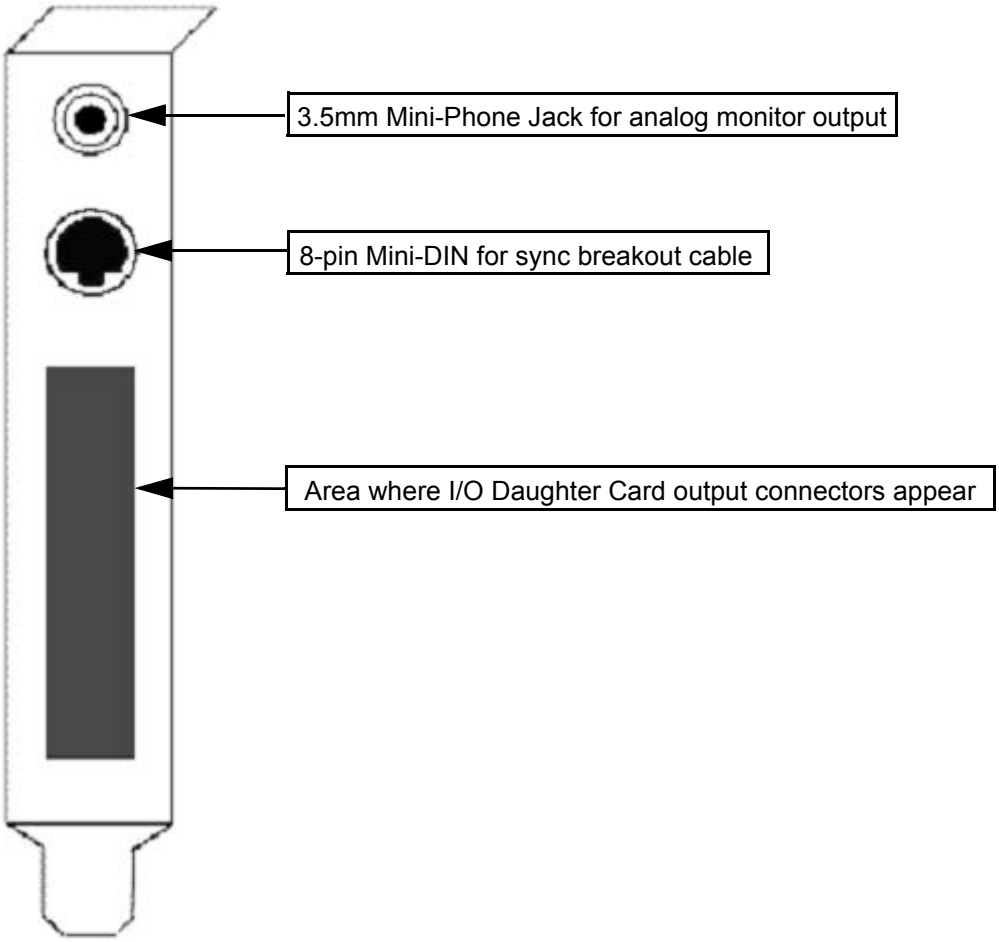
The **Pyramix Synchronization** option provides SMPTE / EBU LTC and VITC time code in/out, video sync in/out and word clock sync. A multi-pin circular mini-DIN connector, on the back plate of the Mykerinos board carries all the system synchronization, time code and video sync signals. An optional break-out cable is provided for connections to time code, sync and video I/O. The Synchronization option allows Pyramix to be configured as a master or slave lock to external time code, video or word clock. It also enables **VITC** and/or a visible time code burn-in window (**BITC**) to be added to video output/throughput.

Cabling Pyramix in your System Environment

Please read this in conjunction with the guide or guides for your specific interface daughter-cards and external interfaces/converters.

Due to the number of possible I/O options and the variety of user environments it is impossible to cover all the variations of cable connections to and from Pyramix. However, here are some general rules and examples:

Mykerinos Back-plate


3.5mm Mini-Phone Jack for analog monitor output
8-pin Mini-DIN for sync breakout cable
Area where I/O Daughter Card output connectors appear

Mykerinos Backplate

Audio Connections

Many users will have A/D Converters for feeding analog audio sources into Pyramix, and D/A Converters for playing analog audio out of Pyramix. In this case, connect your analog audio sources to the A/D Converter analog audio inputs, and the A/D digital audio output(s) to the Mykerinos digital audio input(s). Similarly, connect the Mykerinos digital audio output(s) to your D/A Converter digital audio input(s), and the D/A Converter analog audio outputs to your studio monitors or recorders. It may be also be useful to connect the stereo mini-phone output on the Mykerinos card to either stereo headphones or a stereo monitor console input. The source for this jack can be configured inside the Pyramix software.

Digital Audio Synchronization and TimeCode

THERE MUST BE ONLY ONE SOURCE OF SYNC FOR AUDIO AND TIMECODE

Digital audio relies on extremely accurate timing. In any digital audio system there can only be one source of sync at one time. This is particularly important when planning multi-machine systems. If TimeCode is not locked to the same sync source as the digital audio then either the audio will work properly, or the Time-Code. But **NOT BOTH AT THE SAME TIME**.

Ideally, in any system with more than one device, there will also be an independent source of sync. E.g. a word-clock generator with multiple outputs. Each device is fed by a single output and configured to use this source as its sync reference.

Sync, Video and Time Code Connections

In any digital audio system, it is **VERY IMPORTANT** all interconnected units are locked to the same sync reference. A digital audio signal itself can sometimes be used as the master sync source, but a high stability video or word-clock signal is usually preferable.

The Mykerinos board can be configured inside the Pyramix software to act as either a sync master, or to slave to a variety of incoming signals.

Decide which device in your system will provide the master sync reference, then ensure that all other digital audio devices in your system take their synchronization from it. This will require routing appropriate cables --whether digital audio, video or wordclock cables-- to the various other devices and may also involve a separate sync reference generator and or distribution amplifiers.

If Pyramix is configured as the master (Internal sync), other digital audio devices will probably be able to lock to the digital audio output from Pyramix. However, Pyramix can also be configured to output a wordclock signal at the Video output BNC connector (Pyramix Synchronization option required).

If Pyramix is configured as a slave to an external device, Various synchronization signals can be accepted.

- To lock to incoming digital audio, connect an appropriate digital audio signal to a Pyramix digital audio input**.**
- To lock to incoming video, connect an appropriate video signal to the Pyramix Video Reference input (Pyramix Synchronization option required).
- To lock to incoming wordclock, connect an appropriate master wordclock signal to the Pyramix Video 2 Input (Pyramix Synchronization option required).
- To set the termination jumpers provided on the Mykerinos board, please see the Mykerinos User Guide.
- Pyramix can either output or lock to incoming SMPTE / EBU TimeCode.
- If a master **LTC** Time Code output from Pyramix is needed, cable the Pyramix **LTC** time code out RCA jack or XLR to any other devices slaving to this output (Pyramix Synchronization option required). Pyramix always generates time code when playing.
- To lock Pyramix to an incoming **LTC** time code signal, cable the **LTC** TimeCode output from the TimeCode source to the Pyramix **LTC** input RCA jack or XLR (Pyramix Synchronization option required).
- Pyramix can accept and generate **VITC** in standard PAL/NTSC formats. It can also provide **BITC** (Burnt In TimeCode) on its video outputs.

MIDI Connections

To use Pyramix MIDI functionality with external equipment, you will require a MIDI interface. Many current motherboards include an on-board MIDI interface. If yours does not, it is a simple matter to add one. This can be either an internal PCI card or an external unit connected via a USB port or an RS232 serial COM port.

Installing Pyramix Virtual Studio Software

Installation Overview:

Note: Note: If you have purchased hardware options such as Mykerinos cards, the USB Sync Board and or an AJA video card, please install these first following the instructions in the accompanying documentation.

The **Pyramix** software uses an automated installer wizard which will install all necessary prerequisites. We use a unified installer package containing the current versions of Pyramix, VCube and Ovation. The initial installer screen offers the choice of Pyramix, VCube and Ovation. Choosing Ovation will also install Pyramix.

You may exclude the installation of any of the individual components in the wizard, if the device in question is not present on your machine or if you do not intend to use an item, by un-ticking the tick boxes next to the items listed in the wizard.

Note: Note: The security dongle (or Mykerinos card) must be in place and the security keys entered before attempting to launch Ovation

Driver Signing

Important! During installation in Windows 7 and Windows Vista you will experience a number of warnings about installing drivers which are not 'digitally signed'. Please choose the "Install anyway" option in each case.

Important! Before attempting to install the Pyramix Virtual Studio software in Windows XP please check the following setting:

Start > Control Panel > System : Hardware

Click on the **Hardware** Tab, then click on **Driver Signing**. The Driver Signing Options dialog opens:

Driver Signing Options
During hardware installation, Windows might detect software that has not passed Windows Logo testing to verify its compatibility with Windows. (Tell me why this testing is important.)
What action do you want Windows to take?
Ignore - Install the software anyway and don't ask for my approval
Warn - Prompt me each time to choose an action
Block - Never install unsigned driver software
Administrator option
Make this action the system default
OK
Cancel

Driver Signing Options dialog

Make sure the middle option **Warn** is selected.

If installing on a Windows Vista system you ust be logged in as an Administrator and, if a dialog warning that a driver is not 'digitally signed' appears simply click on the 'Install Anyway' option.

Running the Installer

Note: You must have full Administrator Access to install Pyramix.

1. Insert the Merging Technologies USB memory stick or installation CD/DVD, as applicable, into a suitable socket or drive.
2. Unless you have disabled the function the installer will run automatically.
3. If necessary locate and run the installer manually.
4. Choose Pyramix when prompted
5. At the next screen, de-select any items you do not require.

6. Override any warnings about unsigned drivers during the installation process.
7. Plug in the security USB dongle.
8. Enter the optional keys in MT Security Settings, if necessary.
9. Restart the PC..
10. Before attempting to launch Pyramix, please read First launch on page 16

Note: If the installation appears to freeze for a long period please check that the Driver Signing warning dialog is not hidden behind another Window. Installation will not continue until you click OK in this dialog.

WARNING: Certain computers do not properly shut down despite the reboot command issued by the installer but only perform a log off.

In this case, please activat a full shut down manually.

Authorization System

The Pyramix software and its various software options are protected by an authorization key mechanism which uses a unique registration key number generated by Merging Technologies. Based on purchased software components, this key is unique to your Sentinel or HASP USB dongle serial number or Mykerinos board serial number, your Company Name and your User name. Once you have registered your software you will be provided with this Key or Keys (depending on the options chosen).

When you receive your Pyramix Package you should also receive either an email from your Merging technologies Sales Partner or a printed copy of the email containing your security setting details. If you did not receive this key, have lost it or would like to change the user and/or company name, please contact your Merging Sales Partner with your Mykerinos serial #, your User Name, your Company Name and the list of purchased software components. Usually, a key can be issued within one business day, after the verification of your personal data has been completed.

Enabling Pyramix Virtual Studio with your Software Key

Pyramix Virtual Studio is protected by a special software Key. Once you have registered your software you will be provided with this Key or Keys (depending on the chosen options).

Entering your Key(s)

After the Pyramix installation process you will be prompted to enter your **Authorization Key**. If you click **Yes** the **MT Security Settings** dialog will be launched automatically, allowing the Key or Keys to be entered immediately. If you choose not to enter your Key at this point you can do so later by choosing one of the following procedures:

1. Double-click the file **YourPersonalKeyXXXXX.mtk**. This is attached to the email containing your Key(s).
2. Open the **MT Security Settings Control Panel**
   (Windows Task Bar **Start > Control Panel > MT Security Settings**),
   click the **Import Key** button and browse for your Key file called

   YourPersonalKeyXXXXX.mtk
3. Open the **MT Security Settings Control Panel** (as above), in the **Registration** section select the board number corresponding to the serial number for your Keys or HASP Key for a dongle, click the **Enter Key** button and type your **User Name**, **Company Name** and **Key** then click **OK.** Repeat this step for each Keys listed in the email.

Changing or re-entering a Key

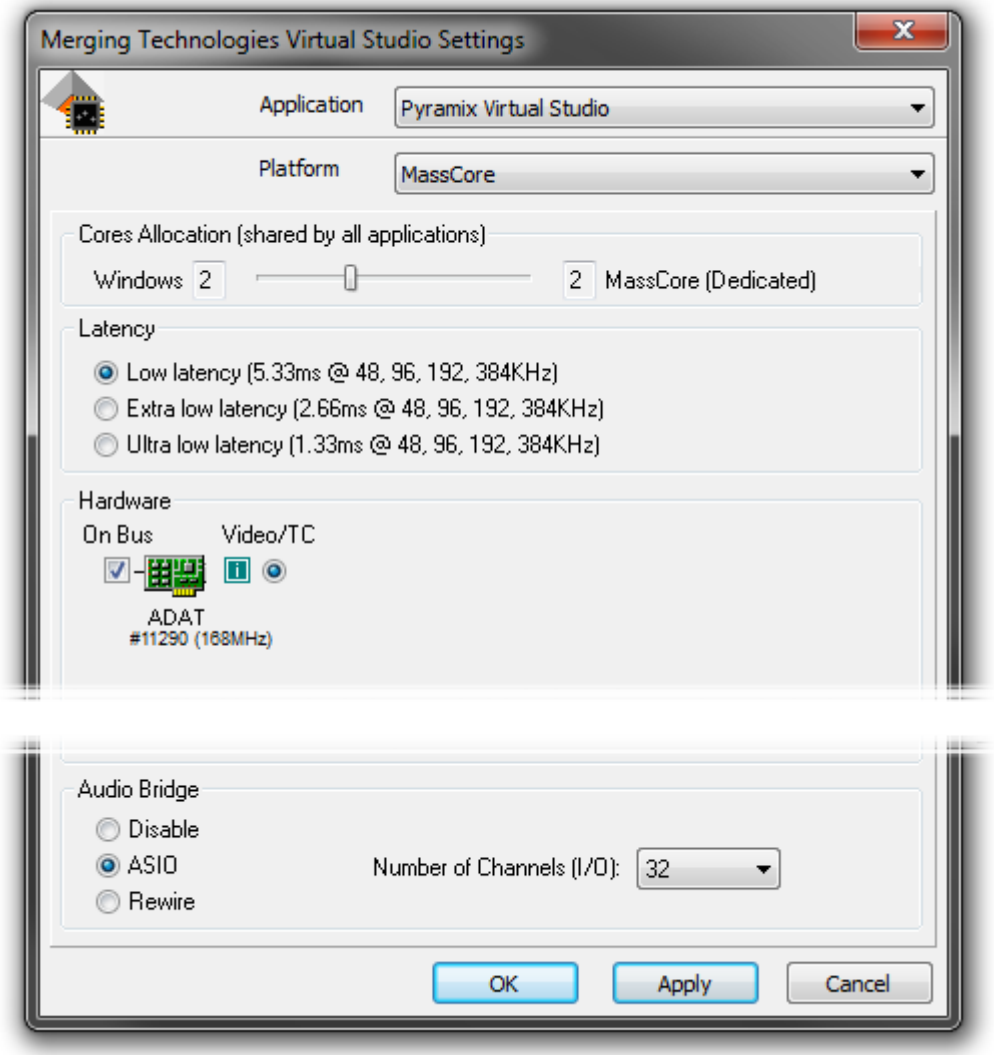
Should you need to subsequently change or re-enter a **Key**, follow the appropriate option above.

The key system is "smart". Only one key or set of keys is required regardless of the number of boards in a system. Any card can hold this key set as the authorization is processed based on a "Logical OR" of all keys present on any and all Mykerinos boards. Of course this Logical OR will only process keys with identical User Name and Company Name to the one entered in the key enabling window.

First launch

Important! After installation has been completed, please reboot the PC before attempting to launch Pyramix Virtual Studio. Then open the **VS3 control panel** application.

Start > Programs > Pyramix > VS3 control panel



VS3 Control Panel

For Pyramix systems with a single Mykerinos board:

Leave all default selections as they are for now, making sure the **On Bus** checkbox for your Mykerinos card is indeed checked then save and exit the VS3 control panel application.

For Pyramix systems with a multiboard configuration:

- Make sure there is a check mark in the **On Bus** boxes for each board installed.
- Check that the **Application** combo box is showing **Pyramix**. If not, select **Pyramix** from the list.
- Select **XDTDM** from the **Buses Mode** combo box
- Select which board is to provide an external **Video/TC** reference with the radio buttons next to the board icons.
- For now, leave the default **DSP Allocation** settings as they are.
- When the VS3 Control Panel **Do you want to save this board selection?** dialog box appears, click on **OK**
- the VS3 Control Panel will close

Double-click on the **Pyramix Virtual Studio** desktop icon to launch Pyramix.

Alternately, choose **Start** > **Programs > Pyramix** > **Pyramix Virtual Studio**.

The main **User Manual** is available from within Pyramix and may be accessed via the **Help** menu or by pressing F1, or online at merging.com

ASIO and Rewire

Please see the main User Manual for details about how to use the Rewire and ASIO support.

Starting Pyramix Virtual Studio

By default the Installer will put **Pyramix Virtual Studio** into your **Programs** folder. It also places a **Pyramix** short-cut icon on the Windows desktop.

The first time Pyramix Virtual Studio is launched, you will need to enter your special **Key** to enable the program properly (Please see: **Enabling Pyramix Virtual Studio with your Software Key on page 15**). On program launch, you will see the main **Pyramix Virtual Studio by Merging Technologies** window with its **Toolbar** at the top, and transport controls and status displays at the bottom.

Pyramix User Interface

The Pyramix user interface has evolved into an extremely powerful tool for manipulating audio. Commands and functions can be accessed from pull-down menus, pop-up menus, tab windows and keyboard shortcuts.

There are generally several ways of accessing any given function in Pyramix. This helps users to work in the way they find most comfortable for the type of projects they are undertaking. It also means 'Power Users' can develop highly efficient operating procedures.

It is perfectly possible to casually use Pyramix without discovering all of the many possibilities on offer. However, by looking deeper, a far more rewarding experience awaits.

Mouse Modifier Keys

The range of possible actions resulting from a mouse click are massively extended by the use of **Keyboard Modifiers**. These greatly aid productivity and are well worth learning. **Please see: Appendix I Mouse Modifier Keys on page 75**

Context Menus

Right-clicking over objects on screen such as Clips, Mixer Strips and controls and Track Headers pops-up menus with commands and options relevant to the object.

Keyboard Shortcuts

In particular we would encourage users to use keyboard shortcuts and preferably the standard Pyramix layout. Keyboard shortcuts can be fully customized and users of other workstations will discover we have also provided familiar keyboard layouts to help them on their learning curve.

Macros

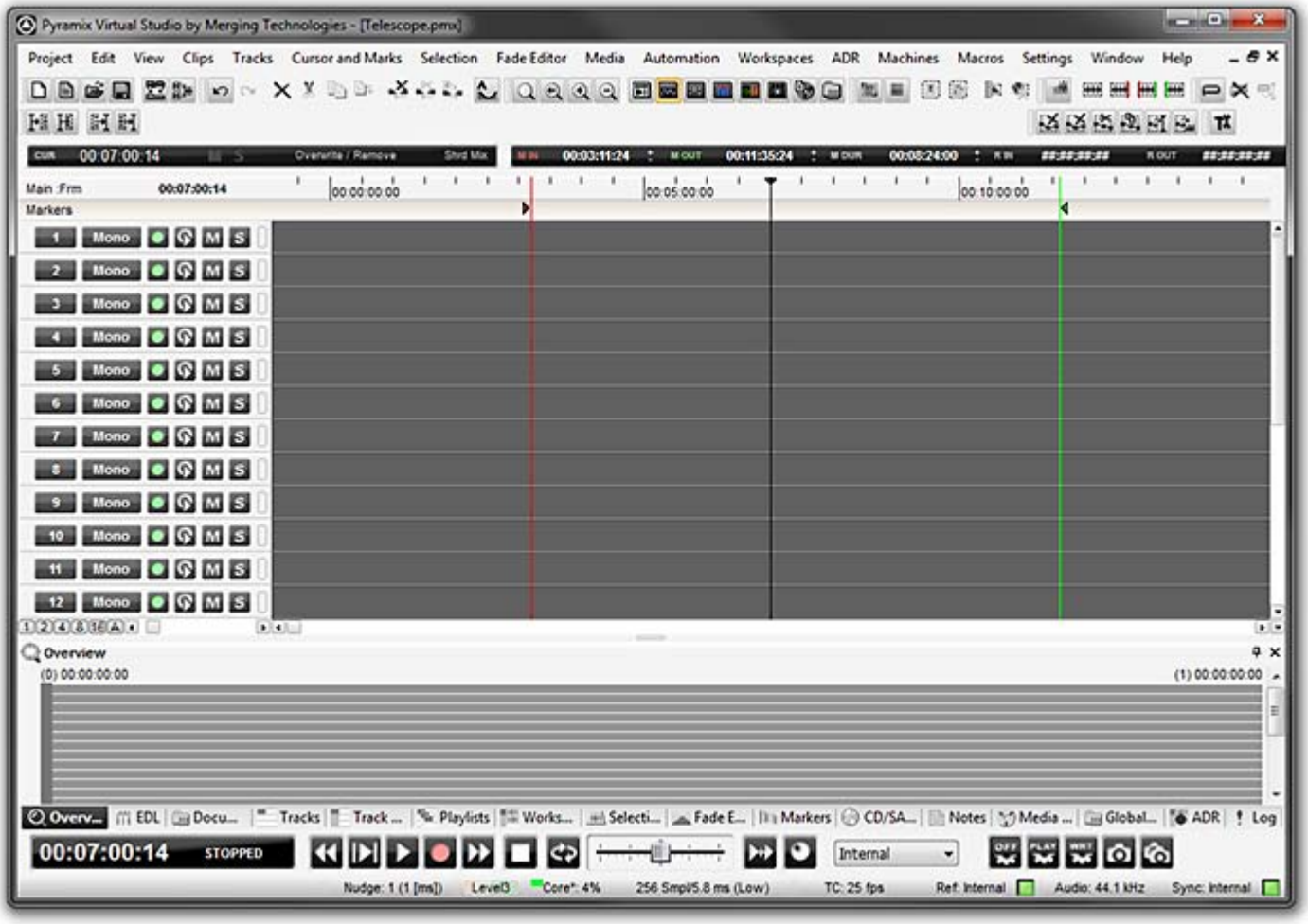
The Macro is another powerful feature of Pyramix. Macros are sequences of commands which can be invoked by a single key or key combination. Some macros are conditional. I.e their precise action depends on variables in the Project. A considerable library of pre-programmed macros is provided together with an editor which enables users to construct their own macros.

Pyramix Concepts

Project

A **Project** is the top level of organization. Projects are saved with the file extension **.PMT**. A **Project** controls and keeps track of all the various elements you are assembling at a given time. A **Project** always contains a **Mixer** and

a **Composition,** viewed on the **Timeline,** or as an **Edit Decision List (EDL**), plus **Libraries** containing **Master Clips**, **Compositions**, **Mixer** settings, and **Fade** settings.


Pyramix Virtual Studio by Merging Technologies - [Telescope.pmx]
Project Edit View Clips Tracks Cursor and Marks Selection Fade Editor Media Automation Workspaces ADR Machines Macros Settings Window Help
Markers
Overview
00:07:00:14 STOPPED
Internal

Pyramix Virtual Studio Window

Mixer

The **Mixer**, is the nexus of the Virtual Studio. The **Mixer** routes all audio into and out of a **Pyramix Project**. It also determines audio sample rates and synchronization. The user can configure the Mixer as appropriate, for the number and type of inputs strips and output buses needed for a Project. Without a properly configured Mixer, no audio can be recorded, mixed, or monitored. The mixer has a number of pages, accessed from the **M A C R** & **O** buttons at top-right of the Mixer window. The default **Mix !** page resembles a conventional hardware mixer and is the one we shall concentrate on in this guide. The other pages deal with Routing, Automation, Configuration and Organization. Full details of these pages can be found in the **Pyramix User Manual**.

Monitor

Pyramix features an extremely powerful monitoring module. This takes a feed from all output buses and offers sophisticated control options. However, you do not have to use the Monitor and not doing so will save DSP power. For this Quick Start Guide, we will simply use the main bus outputs for monitoring. For full details of the Monitor, please see the **Pyramix User Manual**.

Meter Bridge

Pyramix also features a meter bridge. This can display levels for all input strips, all buses and external sources. This is an advanced feature and not necessary for simple use. For full details of the Meter Bridge, please see the **Pyramix User Manual**.

Composition

A **Composition** is any number of **Clips** complete with edits and fades, level settings etc. placed on a **Track** or tracks in a time relation to each other and to the **Timeline**.

Note: A Composition can contain other Compositions.

Timeline

The **Timeline** shows a graphic representation of the current **Composition**. and its location in relation to the **Playhead Cursor**, **In** and **Out Marker Cursors** and various other **Markers.** All editing is undertaken in the **Timeline**, **EDL**, **Fade Editor** and **Trimmer** windows.

EDL

The **EDL** (**Edit Decision List**), is a textual and numeric representation of the same information shown in the **Timeline** and **Fade Editor**. Changes made here are reflected in the Timeline and vice-versa.

Media Files

These are the actual audio data files which can only be seen at the Windows level, e.g. in Windows Explorer. In Pyramix, they are represented by **Master Clips** which reference the raw data files.

Master Clips

The concept of **Master Clips** is one of the keys to the power of Pyramix. An individual **Master Clip** is a set of pointers that reference one or more **Media Files**.

Note that a single **Master Clip** references all **Media Files** in a multi-channel audio recording. E.g. a stereo recording can have one or two **Media Files,** (depending on whether there is a tick in the **One file per track** box in the **Media Option** section of the Record page of **Settings > All Settings > Project**.

When **One file per track** is checked**,** one invisible **Media File** is generated for each channel of a recording but only one **Master Clip**. So.a stereo **Master Clip** references two invisible **Media Files** and a Multi-channel **Master Clip** references as many invisible **Media Files** as there are channels in the recording. check box '**One file per track'**), but will only generate one **Master Clip**.

A **Master Clip** can be mono, stereo, four channels, six channels, 24 channels, in fact there is no limit to the number of channels that can be contained within a **Master Clip**. When a **Master Clip** is placed into a **Composition** there is the option to place it where it was originally recorded.

Master Clips also contain attributes which identify parameters such as a File name, time code stamp and other information.

Clips

The individual **Clips** shown on the **Timeline** contain pointers to **Master Clips** which in turn point to audio **Media Files**.

Media Management - Housekeeping

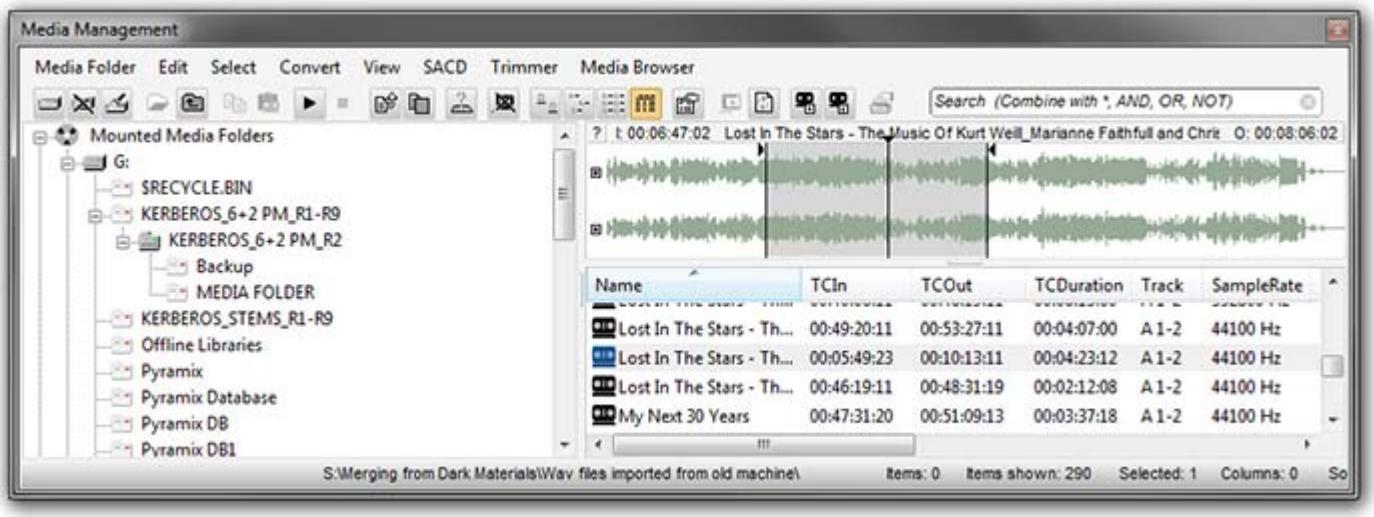
The Windows hierarchical filing system can easily become confusing and cluttered. Complex audio projects generate thousands of more or less enigmatically named files. Keeping track of all the files used in a project can become a nightmare even if the user is meticulous.

Pyramix uses the concepts of Media Folders and Libraries to reduce the clutter and provides management tools specifically designed for audio. This Media Management helps users to work in a structured and simple manner whilst keeping track of all the Project components.

Media Drives and Folders

Media Drives or **Media Folders** are Windows folders which contain **Media Files**. Pyramix needs to specifically mount these **Media Folders** in order to access the **Media Files** contained therein. Once mounted, suitable files are shown as **Master Clips.**

These can be auditioned, trimmed and dragged and dropped or copied and pasted directly into the **Timeline** or into a **User library** from the **Media Management** Window.

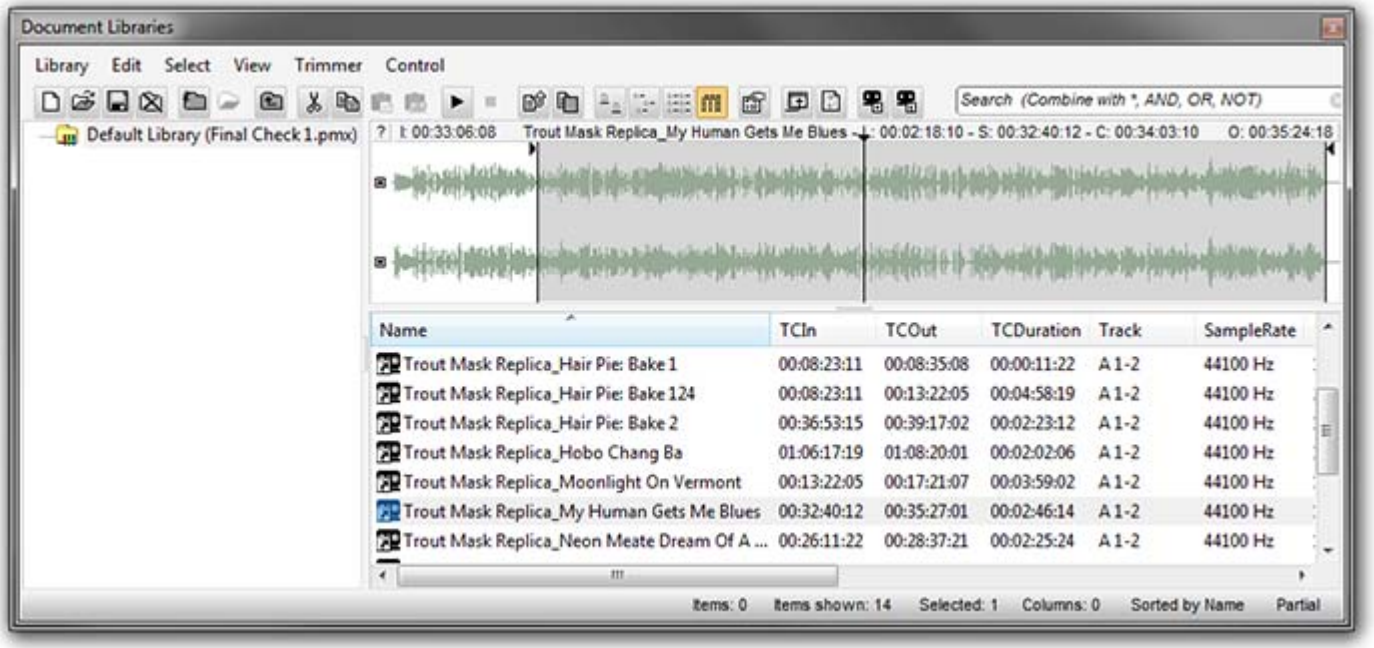

Media Management
Media Folder Edit Select Convert View SACD Trimmer Media Browser
Search (Combine with *, AND, OR, NOT)
Mounted Media Folders
G:
$RECYCLE.BIN
KERBEROS_6+2 PM_R1-R9
KERBEROS_6+2 PM_R2
Backup
MEDIA FOLDER
KERBEROS_STEMS_R1-R9
Offline Libraries
Pyramix
Pyramix Database
Pyramix DB
Pyramix DB1
Name TCIn TCOut TCDuration Track SampleRate
Lost In The Stars - Th... 00:49:20:11 00:53:27:11 00:04:07:00 A 1-2 44100 Hz
Lost In The Stars - Th... 00:05:49:23 00:10:13:11 00:04:23:12 A 1-2 44100 Hz
Lost In The Stars - Th... 00:46:19:11 00:48:31:19 00:02:12:08 A 1-2 44100 Hz
My Next 30 Years 00:47:31:20 00:51:09:13 00:03:37:18 A 1-2 44100 Hz
S:\Merging from Dark Materials\Wav files imported from old machine\
Items: 0 Items shown: 290 Selected: 1 Columns: 0

Media Management Window with Trimmer

Note: Master clips of any supported sample rate can be added in this way but will run at the wrong speed if their sampling rate is not the same as the current project unless automatic sample rate conversion is switched on (default). Please see the Pyramix User Manual for further information.

Libraries

Pyramix uses libraries to help make Project organization tidier. **Libraries** are used to organize project material into logical groupings. However, **Libraries** are not the same as Windows directories or folders: they are only meaningful within the Pyramix environment. A **Library** is a database, containing a collection of pointers to different types of media object.


Document Libraries
Library Edit Select View Trimmer Control
Search (Combine with *, AND, OR, NOT)
Default Library (Final Check 1.pmx)
Trout Mask Replica_My Human Gets Me Blues
Name TCIn TCOut TCDuration Track SampleRate
Trout Mask Replica_Hair Pie: Bake 1 00:08:23:11 00:08:35:08 00:00:11:22 A 1-2 44100 Hz
Trout Mask Replica_Hair Pie: Bake 124 00:08:23:11 00:13:22:05 00:04:58:19 A 1-2 44100 Hz
Trout Mask Replica_Hair Pie: Bake 2 00:36:53:15 00:39:17:02 00:02:23:12 A 1-2 44100 Hz
Trout Mask Replica_Hobo Chang Ba 01:06:17:19 01:08:20:01 00:02:02:06 A 1-2 44100 Hz
Trout Mask Replica_Moonlight On Vermont 00:13:22:05 00:17:21:07 00:03:59:02 A 1-2 44100 Hz
Trout Mask Replica_My Human Gets Me Blues 00:32:40:12 00:35:27:01 00:02:46:14 A 1-2 44100 Hz
Trout Mask Replica_Neon Meate Dream Of A ... 00:26:11:22 00:28:37:21 00:02:25:24 A 1-2 44100 Hz
Items: 0 Items shown: 14 Selected: 1 Columns: 0 Sorted by Name Partial

Document Library Window with Trimmer

User Libraries

User Libraries can contain **Master Clips**, **Compositions**, **Mixer Snapshots, Plug-in Snapshots**, **Fades Settings**, etc…. Each **Project** can have an unlimited number of User Libraries open, each with an unlimited number and mixture of contents.

N.B. In Pyramix **User Libraries**, there is no practical distinction between a section of a **Composition** (**Region**) and a complete **Composition**. Either can be added to a **User Library** or to an existing **Composition**. This is an extremely powerful feature. A single **Clip** or part of a Clip copied to a **User Library** from the **Timeline** appears there as a **Composition.**

Automation in libraries

If the menu item **Edit > Enable Automation Cut/Copy/Paste** is enabled then any operation on Clips (Cut/Copy/Paste, Auto-Ripple, etc…) brings all automation data with it

If you drag a Clip(s) to a library, all automation over that Clip(s) is copied/pasted as well.

Global Libraries

Project Libraries are kept with the Project, **Global Libraries** are available to all projects and users of the system. This can be helpful for sound effects or where several users need access to the same source material to produce different end products.

Project Libraries

Default Library

Each new Project creates an empty **User Library** named **'Default Library'**. This is provided to aid housekeeping and is kept with the Project.

Offline / Reference Libraries

As the name implies **Offline/Reference Libraries** are useful for keeping track of very large projects and material on media that may not be permanently on-line.

Offline or Reference Libraries behave like standard Pyramix Libraries and may be searched in the same manner as others.

Offline libraries can be created in the **Media Management** Tab Window by selecting

Media Folder > Create Offline/Reference Library.

A First Simple Project

This section provides a step-by-step guide to starting a simple new **Project**, recording and playing back some audio and basic editing.

> **Note:** This section is not intended as a substitute for the more detailed information to be found elsewhere in this guide and in the **Pyramix User Manual**.

The following prior steps are assumed:

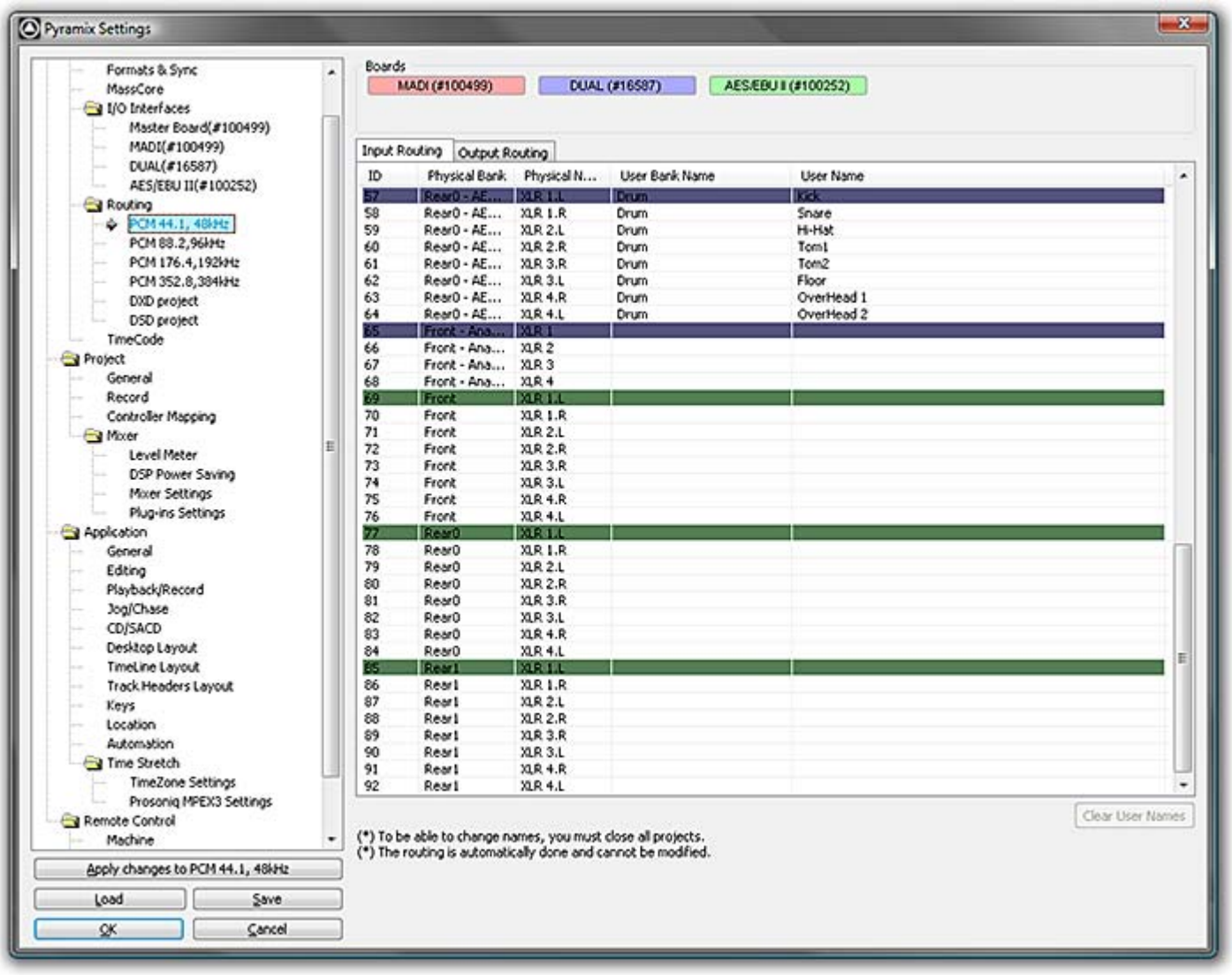
- Pyramix hardware and software installation has been completed.
- An audio source and means of monitoring have been connected to the physical I/O.
- The software has been registered, the registration key(s) entered and the initial settings entered in the VS3 Control Panel.

Start Pyramix

Launch the Pyramix application **Start > All Programs > Pyramix > Pyramix Virtual Studio** or by double-clicking the **Pyramix** Desktop Short-cut. The application will open with no Project loaded.

Connect Physical I/O to Logical I/O

Open the **Settings > All Settings > Hardware > Routing > PCM I/O Routing** page.



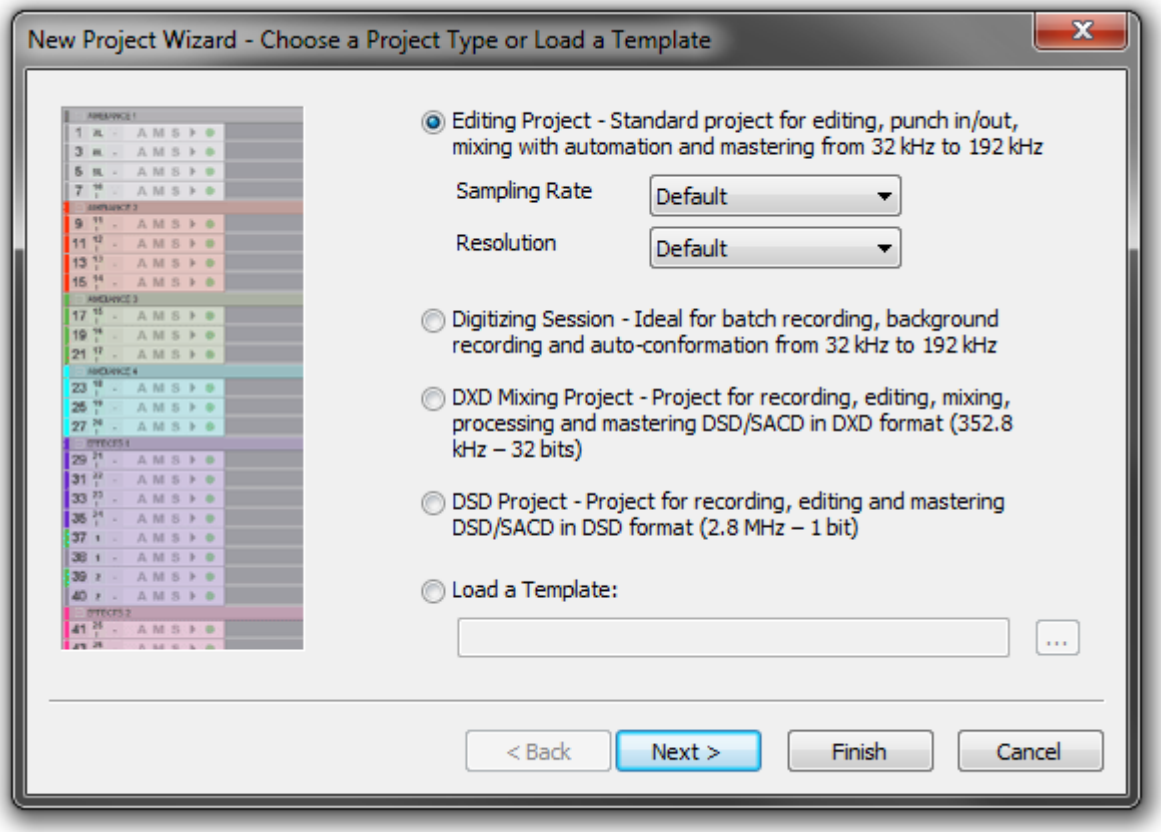
Settings - PCM 44.1,48kHz Input Routing Page

Physical I/O is connected to Logical I/O in ascending, numerical order automatically. For now, accept the default routing by clicking on **OK**.

Open a New Project

Before any recording or playback can be undertaken you need somewhere to work so a **Project** must be created with a suitable **Mixer**.

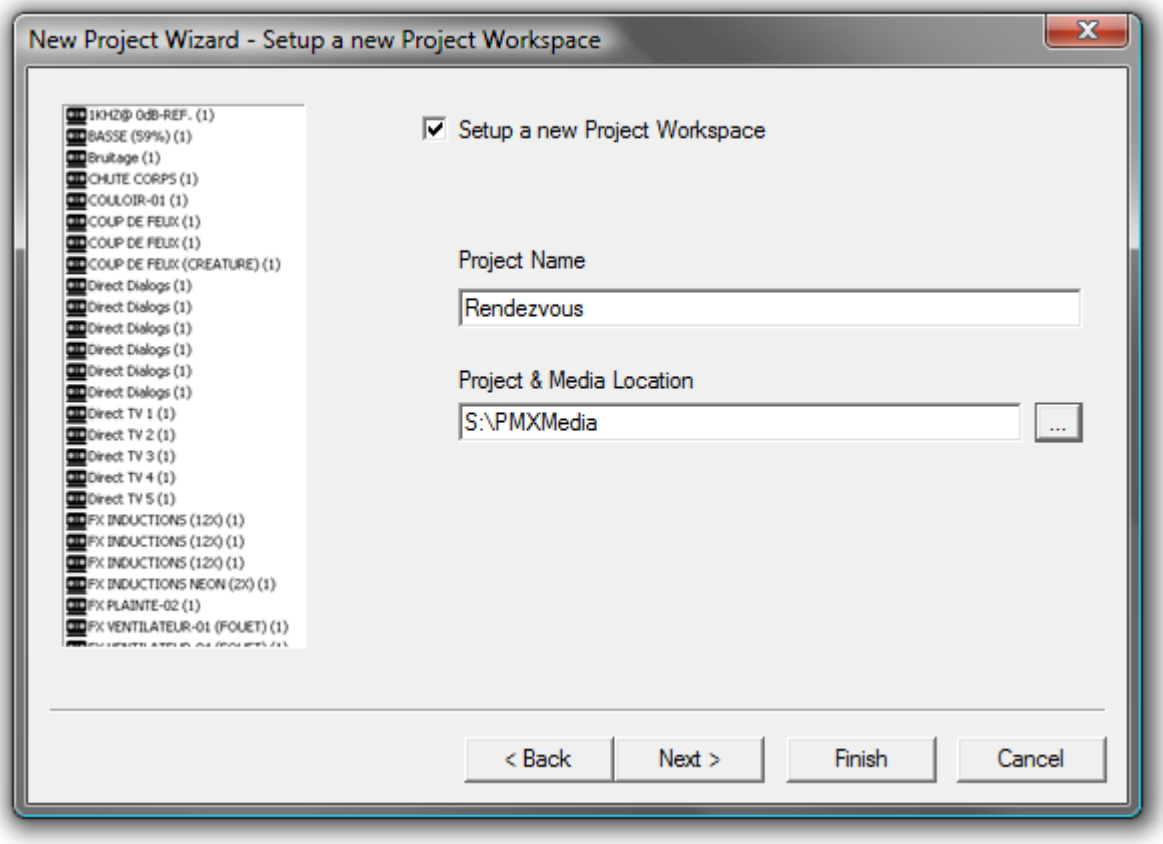
1. Launch **Pyramix Virtual Studio**
2. Choose **Project > New**.
3. The **New Project WIzard - Choose a Project Type** window will open.


New Project Wizard - Choose a Project Type or Load a Template
Editing Project - Standard project for editing, punch in/out, mixing with automation and mastering from 32 kHz to 192 kHz
Sampling Rate
Default
Resolution
Default
Digitizing Session - Ideal for batch recording, background recording and auto-conformation from 32 kHz to 192 kHz
DXD Mixing Project - Project for recording, editing, mixing, processing and mastering DSD/SACD in DXD format (352.8 kHz – 32 bits)
DSD Project - Project for recording, editing and mastering DSD/SACD in DSD format (2.8 MHz – 1 bit)
Load a Template:
...
< Back
Next >
Finish
Cancel

New Project Wizard - Choose a Project Type dialog

4. The default is **Editing Project** which is the type we will use.
5. Choose a suitable sampling rate from the **Sampling Rate** drop-down list. (Use 44.1kHz if in doubt and using an analogue input)
6. Choose a suitable bit-depth from the **Resolution** drop-down list. (Use 24 bit if in doubt)

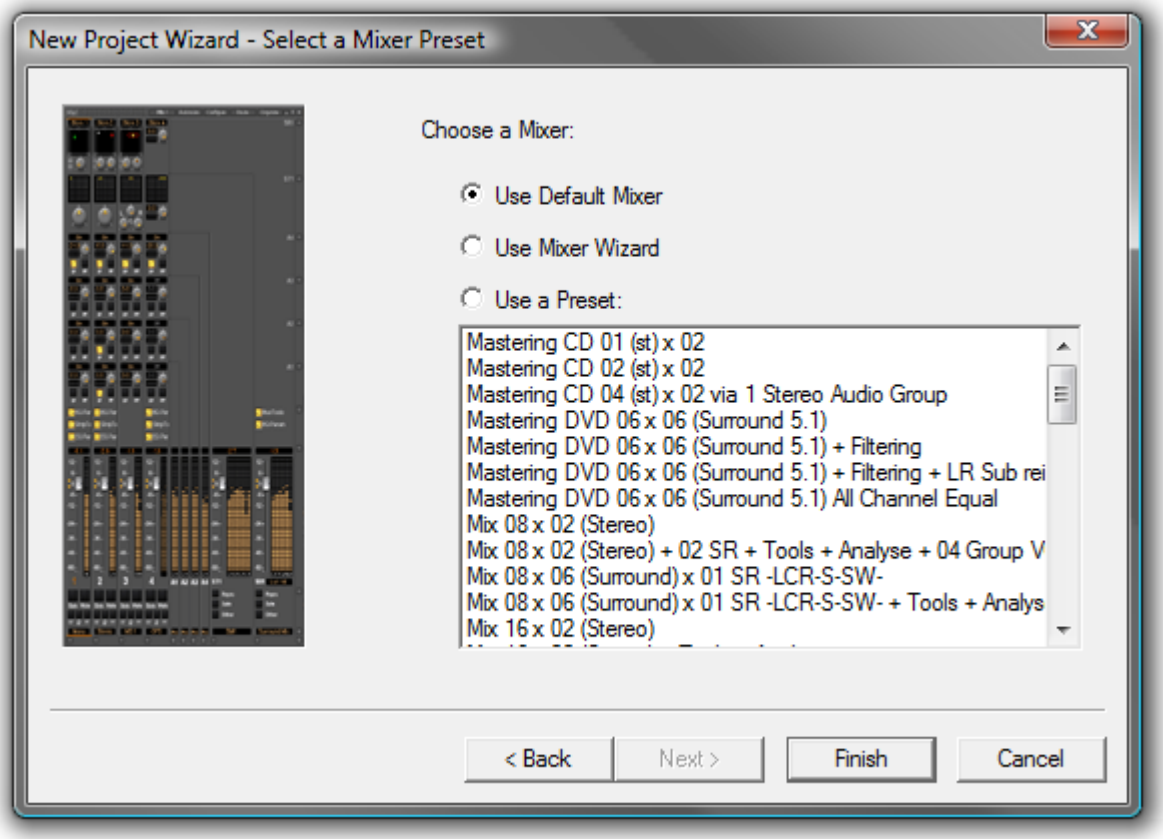
7. Click **Next**. The **New Project WIzard - Setup a New Project Workspace** dialog will open.



New Project Wizard - Setup a new Project Workspace dialog

8. Click in the **Setup a new Project Workspace** box to tick it.
9. Type a name for the Project and either type a suitable path to the **Project and Media Location** or use the **...** button to open a **Browse for Folder** window. This works like a Windows Explorer window and enables you to navigate to a suitable folder.

10. Click **Next**. The **New Project Wizard - Select a Mixer Preset** dialog will open.


New Project Wizard - Select a Mixer Preset
Choose a Mixer:
Use Default Mixer
Use Mixer Wizard
Use a Preset:
Mastering CD 01 (st) x 02
Mastering CD 02 (st) x 02
Mastering CD 04 (st) x 02 via 1 Stereo Audio Group
Mastering DVD 06 x 06 (Surround 5.1)
Mastering DVD 06 x 06 (Surround 5.1) + Filtering
Mastering DVD 06 x 06 (Surround 5.1) + Filtering + LR Sub rei
Mastering DVD 06 x 06 (Surround 5.1) All Channel Equal
Mix 08 x 02 (Stereo)
Mix 08 x 02 (Stereo) + 02 SR + Tools + Analyse + 04 Group V
Mix 08 x 06 (Surround) x 01 SR -LCR-S-SW-
Mix 08 x 06 (Surround) x 01 SR -LCR-S-SW- + Tools + Analys
Mix 16 x 02 (Stereo)
< Back
Next >
Finish
Cancel

New Project Wizard - Select a Mixer Preset dialog

11. Choose the **Mix 08 X 02 (Stereo)** preset in the drop-down list by clicking on the name. Note that the **Use a Preset** radio button is automatically checked.
12. Click **Finish** to activate your new Project. It will open with a **Project Window** and **Mixer Window**. There will be 8 empty tracks in the **Project Editing Panel** corresponding with the **8 Mixer Input** channels.

Configure the Mixer

Note: The information given here assumes a simple, single board system with a daughterboard in a single format. The exact settings of Input and Output numbers will depend on your specific circumstances.

Connect your monitoring amplifier to outputs 1 & 2 of the first card in your system. If this is not possible and you wish to use a different pair of output for monitoring:

1. Click on the **L** XLR icon at the bottom of the Stereo Bus output strip.
2. Select the Physical Output the Left-hand channel of your monitoring is connected to.
3. Repeat with the **R** XLR icon for the Right-hand channel.
4. Similarly, in the Strips you wish to use for record inputs click on the **Input** XLR icon and select the physical input from the pop-up menu. Notice the numbers adjacent to the XLR icons and the numbers in the pale red boxes in the **Track Header** change to reflect the updated routing.

Note: The inputs go directly to the tracks, the strip takes the monitor output from the track.

By default, and when the track monitoring switch (in the Track Header) is set to auto, Pyramix follows the 'European' monitoring convention. I.e. All tracks switch to Input on Stop. If this would cause feedback in your setup choose **US Monitoring** in the **Settings > All Settings > Application > Playback/Record** page. (Or you can

manually cycle the Track output between **Replay**, **Input** and **Auto** by clicking on the Monitoring icon in the Track Header)

Before Recording

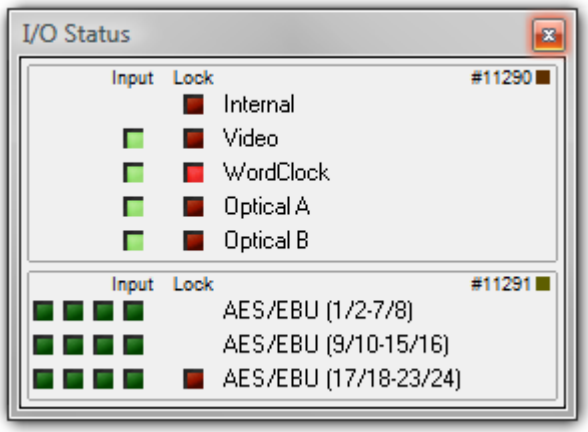
Check Sync

Before attempting to record any audio please check Pyramix and the audio source(s) are synchronized as you intend.

I/O Status Window

The I/O status window can be opened by clicking in the **Sync: xxxxx** section of the Status bar (bottom right of the main Pyramix window. (the **XXX**'s are the current sync source)

This window shows useful information about the input and synchronization status of Pyramix.



I/O Status window

Input sources

Green lights show the presence of a valid digital signal (This does not necessarily mean, that the sampling rate of this input matches the current clock source of Pyramix). When the red light is on and steady, Pyramix is using this input as it's clock reference and is successfully locked up.

Default Clock Source

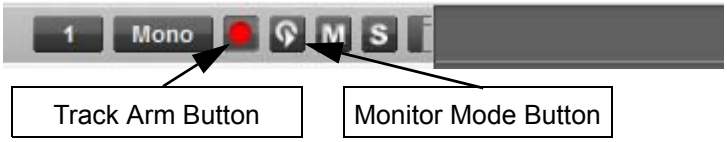
If Pyramix is set up to lock to an external clock source but cannot get a valid signal from this source, it will switch to Internal clock. The red light associated with **Internal** will be on, and the red light associated with the intended clock source will be blinking.

Sampling Rate Mismatch

If Pyramix is set up to lock to an external clock source and the sampling rate set in the Virtual Studio Mixer does not match the sampling rate of the clock source, the green light associated with the clock source will be on, but the red light will be blinking showing the sampling rate mismatch.

Record and Playback Audio

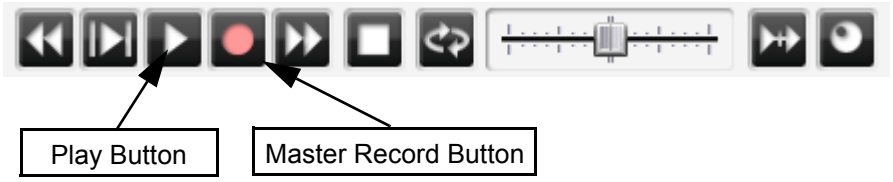
1. Click on the **Track Arm** button on one or more tracks. When red the track is armed for recording.



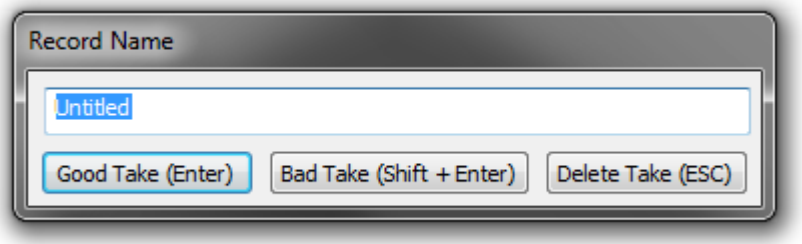
1. Check that the **Monitor Mode** buttons on the armed Tracks is in the default, **Auto-monitoring** state: If not, click the button until this symbol appears.

1. Play some audio into the Input(s) of the Track(s) you have armed for recording. Click on the Master Record button in the **Transport Control** bar and recording will begin immediately. Alternatively, click on the **Play**

button. Recording will begin when you press the **Master Record** button. Notice that red blocks appear in the armed tracks which grow as the recording proceeds.



2. Click on the **Stop** button after a minute or so has been recorded. The **Record Name** window appears:



Record Name dialog

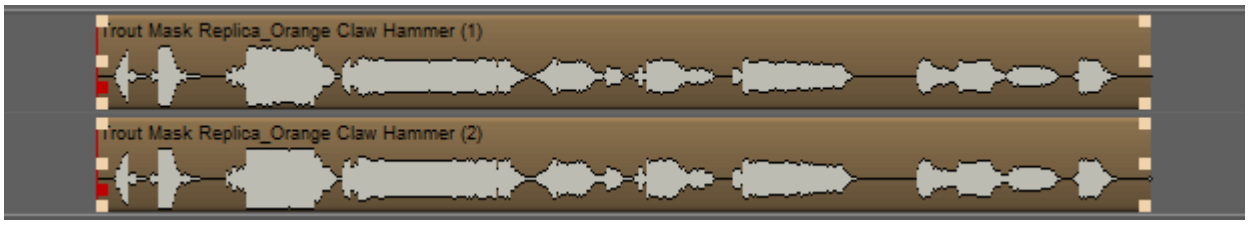
3. Type a suitable name for the recording and click on the **Good Take (Enter)** button.
4. The red blocks change to brown (selected) (default) with light gray (default) waveform representing the recorded material.
5. Click the **Play Selection** button to return to the start of the recording and begin playback of your first recording.

Note: If you cannot hear anything, check the Track Header monitoring mode icon is showing either Auto or Replay.

Edit Audio

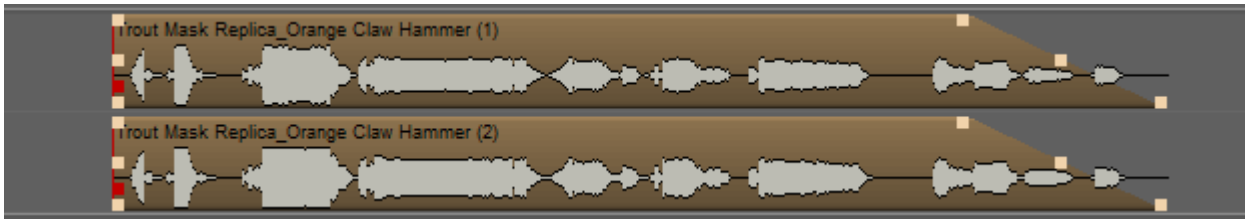
Note: All the editing described here is non-destructive. The only thing changed is pointers to the underlying media file.

1. Click on the clip you have just recorded. If not already selected, notice it darkens in color and **Trim Handles** appear at the beginning and end.

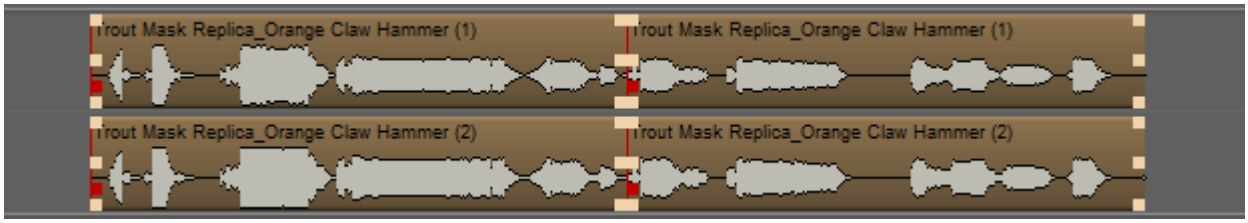


This illustration shows a stereo clip selected. Assuming you recorded in stereo, Pyramix automatically groups the Left and Right clips. If you need to un-group them, **Clips > Ungroup** will do it.

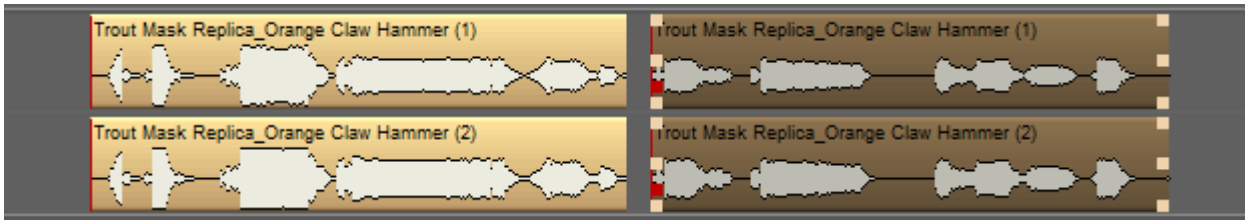
2. Click and drag the selected clip to a new location in time or to another track (or tracks)
3. Click and drag on the middle handle at either end to trim the clip.
4. Click and drag one of the top handles to create a fade.



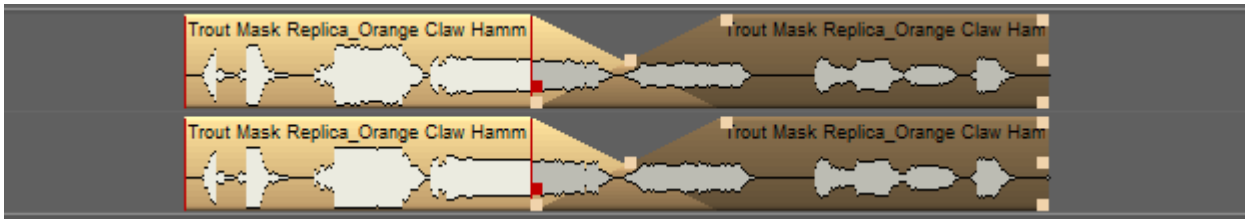
5. Select **Edit > Undo** and the fade will be restored to its previous state.
6. Hold down the **C** key and move the mouse over the clip. Notice the cursor changes to a **knife**.
7. Click somewhere near the middle of the clip.


Trout Mask Replica_Orange Claw Hammer (1)
Trout Mask Replica_Orange Claw Hammer (1)
Trout Mask Replica_Orange Claw Hammer (2)
Trout Mask Replica_Orange Claw Hammer (2)

8. The clip has been split into two separate clips. (Four shown here since it is stereo)
9. Click elsewhere on screen to de-select the clips.
10. Click on the one of the new clips to select it and drag it to create a gap.


Trout Mask Replica_Orange Claw Hammer (1)
Trout Mask Replica_Orange Claw Hammer (1)
Trout Mask Replica_Orange Claw Hammer (2)
Trout Mask Replica_Orange Claw Hammer (2)

11. Hold down the **CTRL** key, click and drag the right hand clip over the other to create a cross-fade.


Trout Mask Replica_Orange Claw Hamm
Trout Mask Replica_Orange Claw Ham
Trout Mask Replica_Orange Claw Hamm
Trout Mask Replica_Orange Claw Ham

The mouse cursor changes to a hand with a X over it, indicating **Auto-Crossfade** mode is engaged. If this is not the case look at **Edit > Auto-Crossfade**. If it has a tick next to it, Auto-Crossfade mode is engaged by default. Click on the menu entry to change mode.

Descriptions of the multitude of other editing tools and functions are to be found in the Pyramix User Manual. Editing can be as simple as we have just described or you can make use of the many 'power user' tools Pyramix has to offer.

Starting a New Project

Project Templates

Pyramix provides a selection of **Templates** for various applications. A Template is a complete Pyramix Project, without any associated audio, specially configured to suit a particular type of activity. Apart from configuring the appearance of Pyramix, the track layout and mixer design, templates also include important optimizations to suit the activity.

Templates also offer a good starting point for creating your own customized templates. To begin a new project using a template choose **Project > New from Template** which opens the **Select a Template** file window.

When a template is opened a dialogue box appears requesting the user to choose a **Media Folder** for the new project. Unless the project is saved using the **Save As** option, the first time it is saved the **Save As** dialogue will appear.

To save a new Template choose **File > Save as Template**, name and save.

New Project from scratch

To start a new **Project** from scratch, choose **Project** > **New.** This launches the **New Project wizard**, which will lead you through the steps to create a new project.

Step 1: Choose the project type

Choose **Editing Project**, select the required sampling rate and resolution (number of bits) or accept the defaults (44.1kHz, 16 bits), then click the **Next** button which will lead you to step 2.

Note that a **Digitizing Session**, **DXD Mixing Project** or **DSD Project,** the other possible choices available in the **New** window, are special kinds of Project described elsewhere.

Step 2: Setup a new project workspace

Checking the box labeled: **Setup a new Project Workspace**, allows you to name the new project and choose a location for the **Project** and **Media Files**. Type in a name for the **Project** and either type in a valid path or use the **Browse button** to browse to a suitable folder. When you have entered the information, click the **Next** button to get to the next step.

If you uncheck the **Setup a new Project Workspace** box, when the new project is created it will be given the working name **Project 1** (or the next available number if **Project 1** already exists) and the save path will be the default.

Step 3: Choose a Mixer

A new Project needs a properly configured Mixer. The **Mixer**, also called the **Virtual Studio**, is used to route all signals into and out of Pyramix; it also determines the sample rate and synchronization source for the Project.

Use Default Mixer

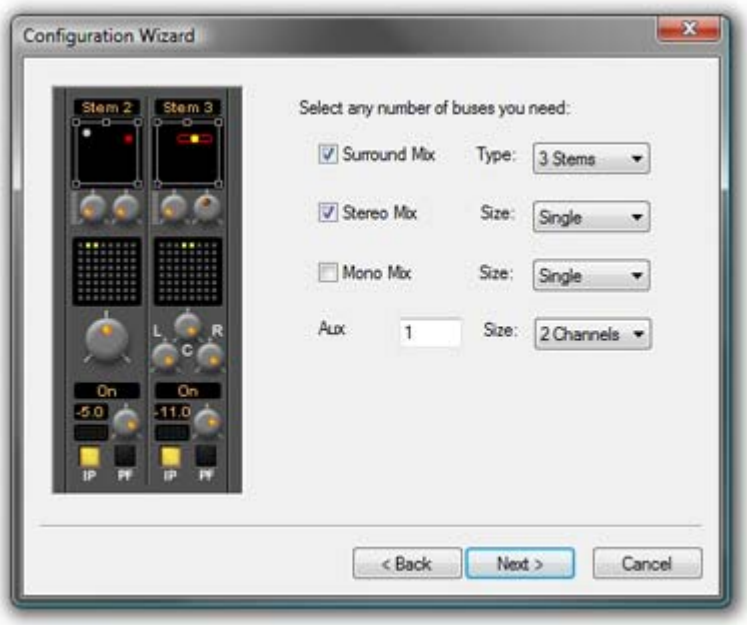
Loads the currently designated **Default Mixer** preset.

Use a Preset

Choose one of the large number of supplied Mixer Presets (and User Presets if any have been created) by clicking on its description.

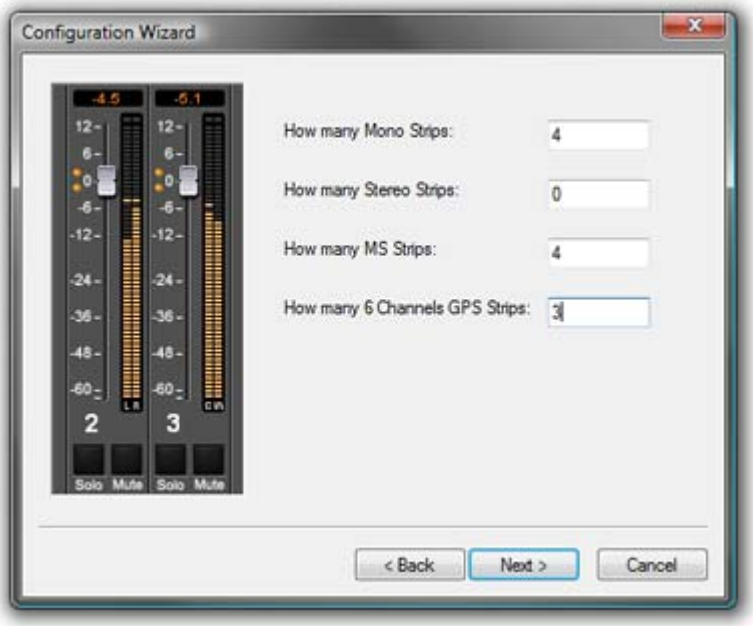
Mixer Wizard

If none of the existing presets is considered suitable, or you just want to start from scratch then selecting **Use Mixer Wizard** and clicking the **Next** button opens this window:



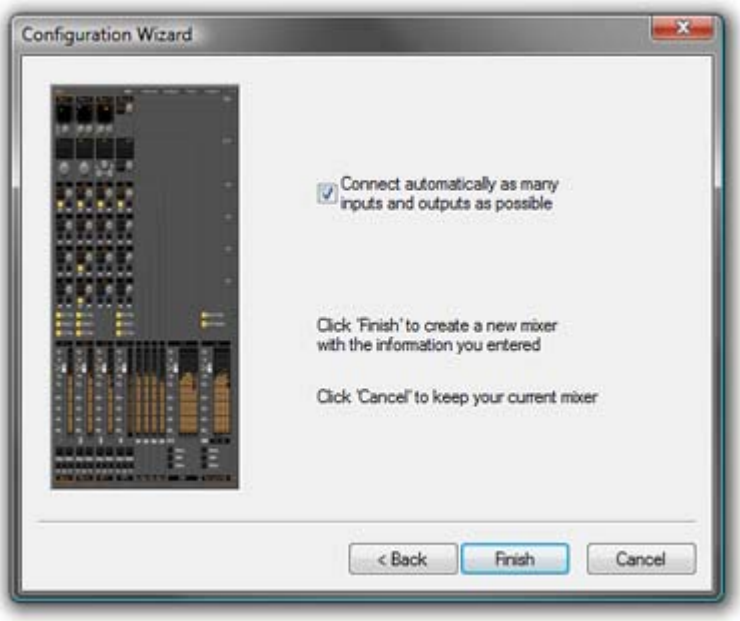
Buses Configuration Wizard dialog

Select the type(s) of busses required using the check boxes and the number needed from the drop down lists on the right. Click the **Next** button to move on to the next page.



Channel Strips Configuration Wizard dialog

Select the type(s) of channel strips required using the check boxes and the number needed from the drop down lists on the right. Click the **Next** button to move on to the next page.


Configuration Wizard
Connect automatically as many inputs and outputs as possible
Click 'Finish' to create a new mixer with the information you entered
Click 'Cancel' to keep your current mixer
< Back
Finish
Cancel

Mixer configuration dialog

Checking the **Connect automatically as many inputs and outputs as possible** check-box will create the same number and types of **Tracks** as there are **Input Strips** and connect as many as possible to the available physical inputs in ascending order and output Buses to the physical I/O attached to the Mykerinos board(s) and Track outputs to Mixer Input Strips, although you can easily reconfigure this later. If the box is not ticked, the tracks will be created in the same way with Track outputs connected to Mixer strips but no physical Inputs or Outputs will be connected.

Clicking **Cancel** opens the new Project with a **Blank Mixer Window** (See below).

Step 4: Open the New Project

Clicking **Finish** creates the Mixer and opens the new Project.

It is **VERY IMPORTANT** to ensure the **Mixer**'s sample rate, synchronization and I/O mode are configured correctly. To check or adjust settings, right-click anywhere on the **Mixer** window, then choose **Settings** > **General...** which will open the **Mixer Settings** window. (Or choose **Settings > Mixer Settings : General** from the main **Settings** menu.

Blank Mixer Window

> **Note:** If you click the **Finish** button before defining a Mixer, the **Default Mixer** will be used and the new Project opened. If no **Default Mixer** has yet been defined a window opens with options of **Double-click**ing **on a Mixer Preset** from the list, using the **Wizard** or

Use right mouse button to configure your mixer

This is the equivalent of right-clicking on a blank area of an existing mixer. We recommend only experienced users choose this option. **Please see: Pyramix User Manual**.

Pyramix Virtual Studio Window Orientation

The main Pyramix Virtual Studio program window is the **Pyramix Virtual Studio by Merging Technologies** window. This is the window which appears when the program is launched. It has a **Toolbar** across the top and status information at the bottom. This main window can be resized, moved, minimized or maximized using standard Windows tools.

The Pyramix **Project** window is always completely enclosed by the main window. A Project window only exists if a Project is open, and appears automatically when a new Project is started. A Project window can be resized, moved, minimized or maximized within the main window using standard Windows tools. If the Project window is opened large enough, it will be seen to have 2 separate panels: an **Editing Panel** (top, called the **Timeline**) and a **Project Management Panel** (bottom). Place the mouse on the dividing line between these 2 panels to move the divider up or down, thereby giving more or less space to a given panel.

The Project Editing Panel contains the Timeline for a Project. This is the place where virtually all audio editing is accomplished. Here audio Tracks may be created, added or deleted, and audio clips may be edited, moved, copied or pasted.

The Project Editing Panel automatically starts with the same number of audio Tracks as there are Input Strip channels configured in the Mixer. Tracks attached to Stereo and Multi-channel strips are grouped accordingly.

The Project Management Panel has a number of tools for managing and navigating Projects. The **Tabs** at the bottom of this Panel page through these tools. A single click on a Tab opens its window at the bottom of the Panel. A double-click opens it as a floating window. Multiple windows can be open at the same time and moved anywhere on screen. Tabs also have some more advanced productivity features. For full details please see the **Pyramix User Manual**. Available Tabs are:

Overview

EDL

Document Libraries

Tracks

TrackGroups

Playlists

Workspaces

Selection

Fade Editor

Markers

CD/SACD

Notes

Media Management

Global Libraries

Log

ADR (If you have this option)

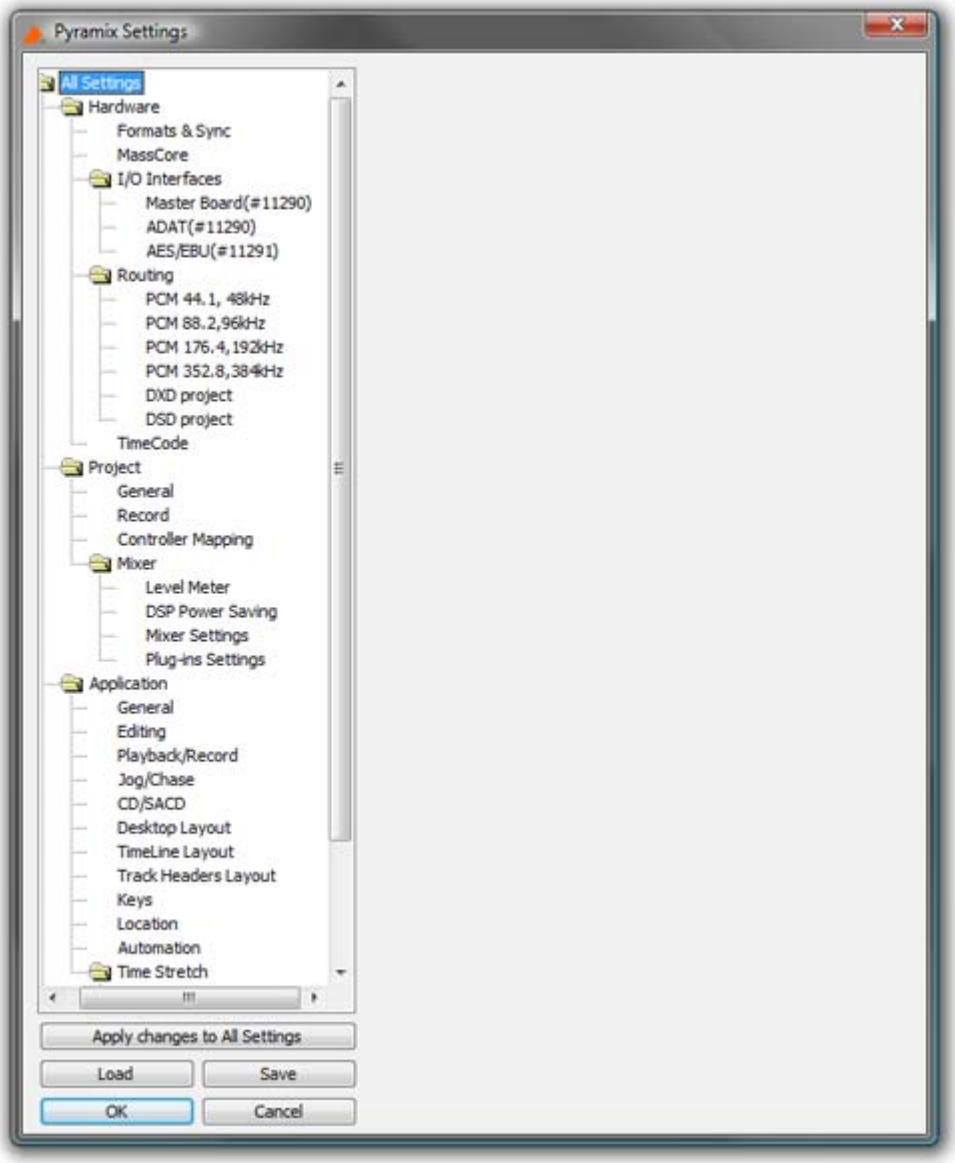
This guide cannot cover the all the Tab windows in detail. Please see the **Pyramix User Manual** for a full description.

Settings

The **Settings** menu groups **All Settings**, the **Keyboard Shortcut Editor** and the **Macro Editor**.

Pyramix is massively configurable to suit diverse applications and personal preferences. To keep the vast number of parameters manageable, Pyramix has an intuitive **Settings** dialog window.

The **Pyramix Settings** dialog window brings together all Pyramix settings. You will find detailed information about individual pages in the **Pyramix User Manual**.



Settings Window Tree and buttons

The left-hand side of the window shows all available settings grouped in folders. Folders can be collapsed or expanded by clicking on the folder icons. By default, all folders are open, displaying the Settings pages they contain by name. Clicking on a settings page opens it in the right-hand side of the window for viewing and editing.

Settings Buttons

Apply changes to ...

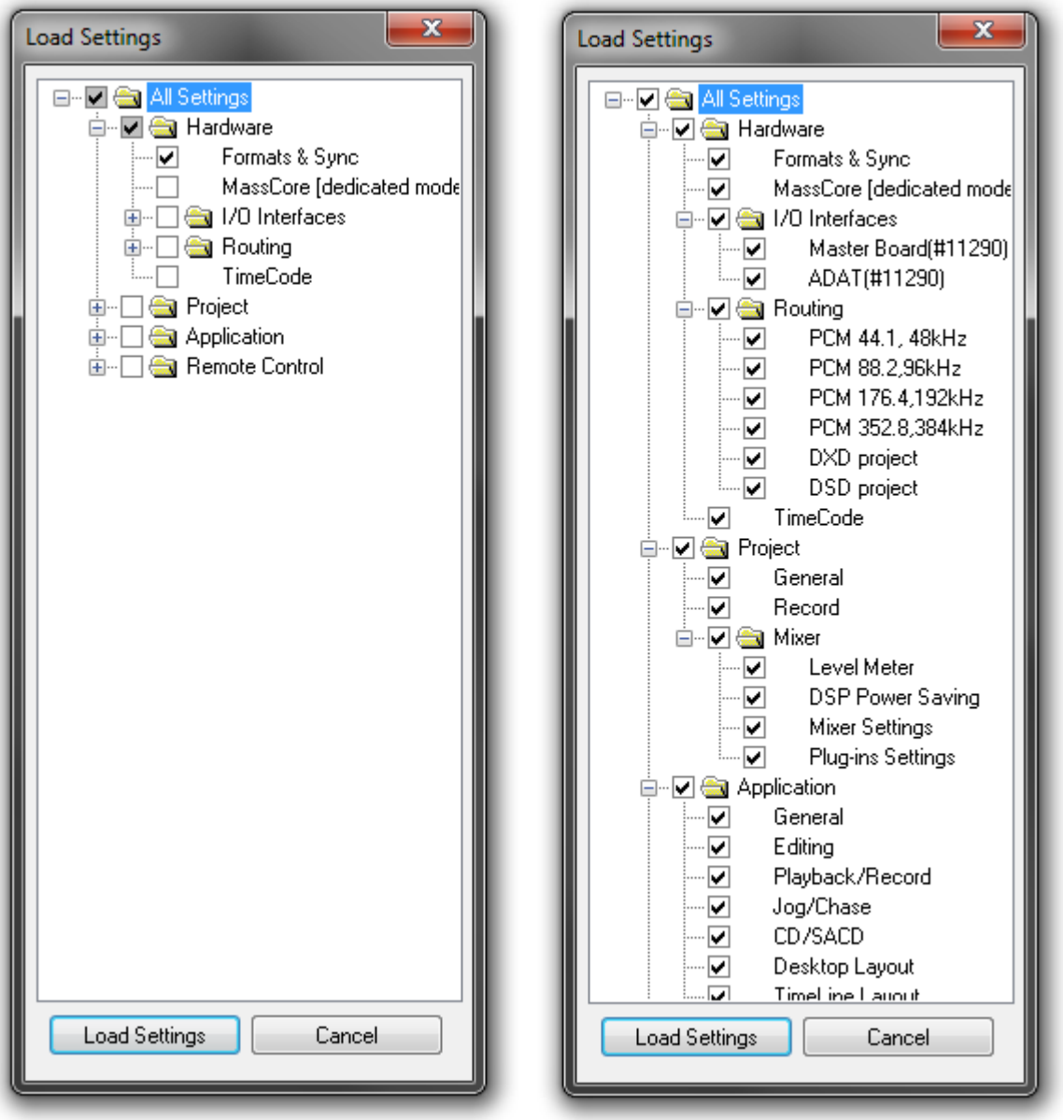
Below the Settings folders tree view the first large button's function and label changes to reflect the currently open settings page (if any). **Apply changes to ...** does as it says without saving the changes to a Settings file. Settings can be saved selectively or in their entirety for future use.

Save

To save all settings, Click on the: **Save** button to open a **Save As** browser window. If necessary, navigate to a suitable location for the file. Type a suitable name in the **File name:** box and click the **Save** button to save the file and close the browser window.

Load

Load opens a Browser window to enable location of settings **Profile** (***.pms**) files. When the required file has been located clicking on the **Open** button loads the file and opens the **Load Settings** dialog:



Load Settings Selective and Load all Settings

Loading Settings Selectively

Load Settings loads only the settings with ticked boxes. The **Load Settings** dialog auto selects the currently selected page. If a folder box is ticked but gray, not all the sub-folder and individual settings are selected. Clicking a folder check box ticks the boxes of all the sub-folders and pages they contain. Thus, clicking **All Settings** as above un-ticks everything and clicking again ticks all the boxes i.e. selects everything..

OK

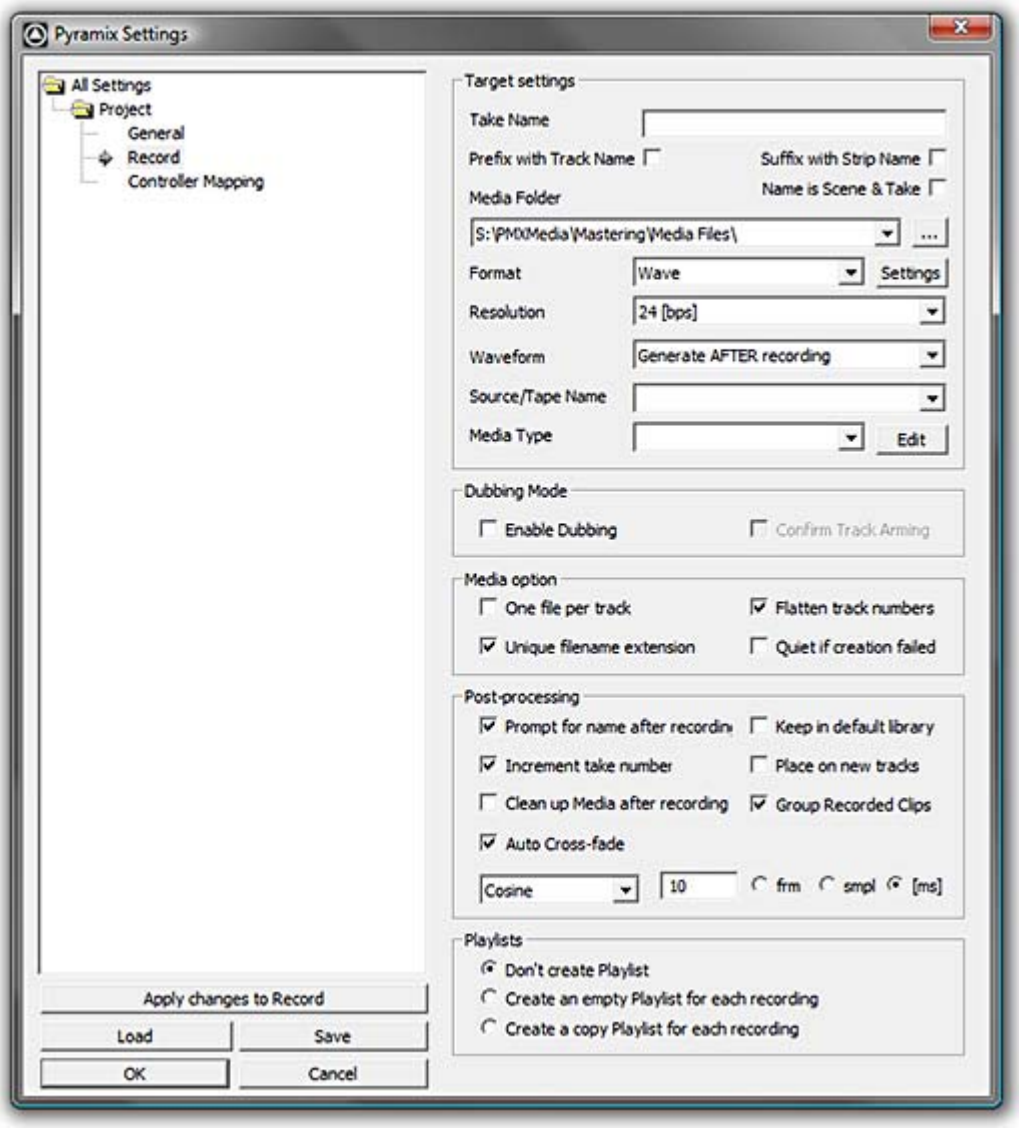
Saves any changes made to settings and exits the **Pyramix Settings** window.

Cancel

Cancels any changes made to settings and exits the **Pyramix Settings** window.

All Settings > Project

The **All Settings > Project** folder has three pages, **Information**, **Record** and **Controller Mapping**. These allow configuration of settings and information specific to the Project. For now, we will briefly look only at the **Record** page.



All Settings Project Record page

Use the Record page to define the destination folder, file type, bit depth and format for all Media Files captured or imported into the Project. This information is required before any capture of audio can be accomplished. Select the Windows folder for the Media Files using the **Media Folder** text entry box. The combo box accesses all mounted Media Folders and the adjacent **...** button opens a browser. The default destination will normally be the **\PmxMedia** folder. Choose the bit depth or word length for captured or imported files from the **Resolution** combo box. This will normally be either 16-bit (16 bps) or 24-bit (24 bps). Choose the file format for captured and imported audio Media Files using the **Format** combo box. A variety of file formats can be chosen, although the native PMF file format is most efficient and is especially recommended for projects with a high track count. Finally, tick the **One file per track** box to generate a separate monaural Media File for each track recorded or imported into Pyramix rather than a single interleaved Media File containing all tracks recorded in a single pass.

Recording

Recording Audio into a Pyramix Virtual Studio Project

Start a new Project, or open an existing one. Be certain to set the Mixer sample rate and sync source as desired. You will need to configure at least the number of Mixer Strip channels as the number of Tracks you wish to record.

Before beginning audio capture, make certain to choose the appropriate destination **Media Folder**, **Resolution** (bit depth or word length) and **Format** (file type) on the **Record** page of **Settings > All Settings > Project**.

Each Track has a tri-state **Record Ready** toggle button, located on the left hand side of the Track itself in a Track information and setup area.

Tip: Right click on a track arming button opens the **Settings > All Settings > Project** dialog immediately on the **Record Page**.

- A **Green Dot** on the Record Ready button indicates Record Safe mode, the default when Tracks are newly created. When in this state, the Track cannot be recorded to.
- Click on the Record Ready button once to toggle to Record Ready mode. This is indicated by a **Red Dot**. The Track will now go into Record mode immediately when the master Record button is pressed in the Transport Strip or Transport window.
- Alt-Clicking on the Record Ready button toggles to a Record Punch In mode. This is indicated by a **Red Dot flanked by 2 red vertical lines**. In this mode, when the master Record button is pressed in the Transport Strip or Transport window, the Track will stay in Play mode until a marked In point is reached, then the Track will go into Record mode. It will stay in Record mode until a marked Out point is reached.

To Record audio directly into the Tracks of a Project, using Pyramix Virtual Studio as if it were a tape machine:

1. Set the Destination Folder, Resolution and Format as above.
2. Arm each Track on which you wish to record. In this case, set each Track to Record Ready mode (simple Red Dot).
3. Check your input levels using the Mixer, and adjust as appropriate.
4. Position the Playhead Cursor where you want to begin the recording in the Composition. You may wish to zoom in so that you can better see the recording as it progresses.
5. Press the red master Record button in the Transport Strip or Transport window. The recording will begin, and display a red bar in those Tracks you have armed for recording.
6. Press the Stop button in the Transport Strip or Transport window to stop the recording. A **Record Name** window will appear.
7. If you are satisfied with the recording, type an appropriate name into the Record Name register and click the **Good Take (Enter)** button. This will save an audio Media File of the type selected into the selected Media Folder, and with the Master Clip name you just chose. If you are not satisfied with the recording, click the **Delete Take (esc)**. button and the recording will not be saved. If you want to keep it anyway, click the **Bad Take (Shift + Enter)** button which will save the recording with the bad take flag set.

Virtual Multi-track

Templates

A number of **Template**s suitable for multi-track recording are provided with Pyramix. These **Templates** have all the required settings already in place. If none of the supplied Templates is exactly suitable for your task it will save time if you modify the one closest to your needs and save it as a Template for future use. Please see also: **Project Templates on page 30**

Settings for Multi-track recording

Multi-track recording can be demanding on disk performance, DSP and the host CPU. In order to optimize Pyramix for the purpose if not using one of the supplied Templates the following settings should be made in the **Record Page**:

- Flatten Track Numbers: OFF
- Quiet if creation failed: ON
- Prompt for name at end of recording: OFF
- Keep in default library: OFF (Should always be OFF)

Suggested Settings

- Group Recorded Clips: ON
- Increment Take Number: ON
- Prefix with Track Name: ON

To Record audio directly into the Tracks of a Project, using Pyramix Virtual Studio as if it were a tape machine:

1. Set the **Destination Drive**, **Resolution** and **Format**.
2. **Arm** each **Track** on which you wish to record. In this case, set each **Track** to **Record Ready** mode (simple **Red Dot**).
3. Check your input levels using the **Mixer**, and adjust as appropriate.
4. Position the **Play Head Cursor** in the **Composition** where you wish the recording to start.
5. Click the red **Master Record** button in the **Transport Strip** or **Transport Window**. The recording will begin, and display a red bar in those **Tracks** you have armed for recording.
6. Press the **Stop** button in the **Transport Strip** or **Transport Window** to stop the recording. A **Record Name** window will appear.

If you are satisfied with the recording, type an appropriate name into the **Record Name** box and click the **Good Take** button. This will save an audio **Media File** of the selected type onto the selected **Media Drive**, with the name you just chose and place a **clip** in the **Timeline**, also with the same name. If you are not satisfied with the recording, click the **Delete Take** button and the recording will not be saved. The third option is **Bad Take.** A **Bad Take** is saved and a **clip** placed in the timeline just like a **Good Take**, but the **clip**'s color is set to a specific color (definable in the **Settings > All Settings > Application > TimeLine Layout Page**) and are numbered the following way: Take 1, Take 2, Take 3 (Bad 1), Take 3 (Bad 2), Take 3 (Bad 3), Take 3, Take 4, Take 5 (Bad1), Take 5, and so on… This helps manage takes where there are mistake(s) but the user wishes to keep them anyway.

To Punch In audio directly into the Tracks of a Project, using Pyramix Virtual Studio as if it were a tape machine with punch in capabilities:

1. Set the Destination Drive, Resolution and Format as above.
2. Arm each **Track** on which you wish to punch in. In this case, set each **Track** to **Record Punch In** mode (**Red Dot with 2 vertical bars**).
3. Check the input levels using the **Mixer**, and adjust as appropriate.
4. Mark a punch in record **In** and **Out** point. This can be done either by marking a selection area on a **Track**, or by setting a **Mark In** and **Mark Out** on the **Time Scale** bar. The simplest way to mark a selection area on a **Track** is to click and drag in the **Track**: a darker gray rectangle indicates the selected area. The simplest way to set a **Mark In** is to **Shift-click** on the **Time Scale** bar: a movable red triangle and vertical line indicates the **Mark In**. The simplest way to set a **Mark Out** is to **Ctrl-click** on the **Time Scale** bar: a movable green triangle and vertical line indicates the **Mark Out**. A selection takes precedence over Mark In and Out for punch in.
5. Position the **Play Head Cursor** before the marked **In** point or **Selection** area.
6. Press the red master **Record** button in the **Transport Strip** or **Transport Window**. The **Play Head** will begin moving through the **Composition**, and **Tracks** will begin playback. Recording will begin on the armed **Tracks** as soon as the selection area or **Mark In** point is reached during playback. A red bar will be displayed in those **Tracks** which are recording.
7. The recording will stop automatically when the selection out or **Mark Out** point is reached. The **Play Head Cursor** will continue playing through the **Composition**.
8. Press the **Stop** button in the **Transport Strip** or **Transport Window** to stop playback. A **Record Name** window will appear with the same options as a normal recording.

Dubbing Mode

This mode is provided principally for film re-recording. It allows tracks to be Armed or Disarmed for recording while recording is taking place.

Dubbing Mode is selected via the **Settings > All Settings > Project > Record** Page, **Dubbing Mode** section:

Enable Dubbing

When checked, **Dubbing Mode** is engaged.

Confirm Track Arming

Only available when **Dubbing Mode** is selected in the adjacent check box. A check in this box means that any changes to track arming made whilst recording must be confirmed by a new Record command before they will take effect.

The Timeline

The **Timeline** is the place in Pyramix where audio **Clips** can be edited, faded up and down and otherwise arranged into a mono, stereo or multi-channel digital audio **Composition**.

The **Fade Editor** provides elegant alternative methods of viewing and adjusting the parameters of edits in the timeline.

A **Source / Destination Editing** model is supported but is outside the scope of this guide. Please see the **Pyramix User Manual** for full details.

Tracks

Each Composition contains a user defined number of audio **Tracks** on which audio Clips can be placed, or audio inputs can be recorded. Blocks representing placed or recorded Clips will appear on the Track as soon as a Clip has been placed or recorded onto it. The Track itself stretches horizontally beneath the Time Scale bar, and multiple Tracks are stacked up vertically.

On the left side of each Track is a Track **Header** panel for that Track.

Some operations only apply to a selected track. The Header panel will be shaded darker when selected. A Track can be selected by left-clicking anywhere on blank track.

Adding and Deleting Tracks

For convenience, a Composition starts with the same number of Tracks as Input Strips were defined in the Mixer for that Project. However, Tracks can easily be added or deleted.

To add Tracks, select **Tracks** > **New Audio Track** from the Project window pull-down menu. This opens a **Create New Track** window. Type in the number of new Tracks to create and click OK. The chosen number of Tracks will be added immediately above the currently selected Track.

To delete a Track, first select the Track to delete by clicking on it. (The Track header will darken to indicate selection) Then choose **Tracks** > **Delete** from the Project window pull-down menu. The Track and all Clips placed on it will be deleted.

Note: Only the Clip or pointer will be deleted, not the original Media File.

You can also right-click the left hand side of the Track Header to open a context menu that enable you to add or delete Tracks.

Routing Tracks to/from the Mixer

When a Mixer is created, Pyramix will automatically create the same number of Tracks as Mixer Input Strip channels.

During Track playback, Pyramix automatically routes the output of each Track to a corresponding Mixer channel input, so that Track 1 output routes to Mixer channel 1 input, Track 2 to Mixer channel 2, etc.

Similarly, during Track recording or input monitoring, Pyramix will attempt to automatically route the input selected on each Mixer channel to a corresponding Track, so that the Mixer channel 1 input routes to Track 1 input, Mixer channel 2 to Track 2, etc.

These default Track I/O assignments can easily be changed by the user.

In each Track Header, you will find a pale green box with a number superimposed on it; and a pale red box with a number superimposed on it. The green box is the Track output assignment TO the Mixer channel input; and the pale red box is the Track input assignment FROM the Mixer channel live or internal bus input.

To change a Track input or output assignment, just click on the corresponding Track input or output, then select the appropriate Mixer channel from the pop-up list.

When an input or output channel is not assigned to a Track, the corresponding box for that Track will have a dash in it instead of a superimposed number.

Many track outputs can be assigned to the same Mixer Strip Channel, they are therefore sub-mixed before entering the Mixer. This allows a lot more tracks to play than the number of Mixer Strip Channels.

Clips and Compositions

Dragging Clips onto a Track

The simplest way to place an audio Clip onto a track is by dragging it from a Media Folder or User Library. To drag from a Media Folder:

1. Click on the **Media Management** Tab in the Project Management Panel.
2. Under the **Media** list in the window, click on a mounted Media Folder or subfolder to select it. It will be highlighted. The Master Clips contained in that Media Drive will all be listed on the right side of the window.
3. Select a Master Clip from the right side by clicking on it with the left mouse button. It will turn be highlighted.
4. Drag that Clip into a Track. You can place it into any Track, at any point on the Track.
5. The procedure for dragging a Clip from a Library is virtually identical to that outlined above for Media Drives. However, access the Library using the **Global Libraries** or **Document Libraries** Tabs in the Project Management Panel.

Note: If you drag a clip from a Library or the Media Manager and release it over the blank space below the tracks in the Project Editing pane a new track (or tracks) will be created to accomodate it.

Copy and Paste

Another way to get Clips into Tracks is by copying and pasting them.

1. Select a Master Clip in a Media Folder or an object from a Library.
2. Right-click on the object, and choose **Copy** from the pop-up.
3. Place the Playhead Cursor where you want to paste the beginning of the object.
4. Right-click on the Track to which you wish to place the object, and choose **Paste to Cursor** from the pop-up. The beginning of the object will be placed at the Play Head in the Track on which you right-clicked. You can also choose **Paste** to insert the object under the mouse cursor.
5. Be aware that Pyramix allows clips of different sample rates to be placed in the Timeline. Where the sample rate of the Clip does not match the sample rate of the Composition it will play at the wrong speed unless autamtic sample rate conversion is set (default). Where a clip's sample rate is different to the project a small **SR** icon is displayed in the track to indicate that it is at a different sample rate and is being converted automatically. If the **SR** icon is red, automatic sample rate conversion is switched off and the Clip plays at an incorrect speed.
6. Sections of Master Clips and selections which may encompass several clips over several tracks are treated in the same way.

Editing

Clips in a Composition on the Timeline

As with objects in a Media Drive or Library, Clips in a Composition are just pointers to the original audio Media Files. Any actions performed on a Clip in a Composition will affect neither the original audio Media File, nor the master Clip in the Media Folder or object in a Library from where it came. In the Project Editing Panel, a Clip can be edited, shortened, split into 2 Clips, moved, level controlled, deleted, etc. and all actions will ONLY affect the Composition.

Once in the Composition, each Clip by default displays a **Waveform** of the audio file to which it points. This Waveform display can be enabled or disabled by the user.

Selecting a Clip

Click on any Clip to select it. It will change color to indicate selection. Shift-click to select multiple Clips at the same time.

Moving a Clip

Any Clip can be easily moved in time on its Track, or moved to another Track. Simply click on the Clip to select it. Now just click and drag it to the new location.

Clip Handles

Once selected, a Clip shows various **Handles** which may be used to manipulate that Clip. The lighter **Trim Handle** on the left side of the Clip allows adjustment of the beginning of the Clip, and the lighter Trim Handle on the right side allows adjustment of the end. Each of these Trim Handles consists of 3 **Control Points**.

Click and drag on the middle Control Point of these Trim Handles to move the head or tail of the Clip as desired to shorten or lengthen the Clip. These can be moved out to the full extent of the original audio Media File to which the Clip is pointing.

The top Control Point controls the Fade In and Fade Out timing for the Clip (see Fades below).

In addition to the beginning and ending Trim Handles, the red Handle controls a Clip's internal **Sync Point**. The Sync Point can be used as a reference point for a variety of actions. To move the Sync Point, just click and drag on its single red Control Point.

Grouping Clips

To **Group** multiple Clips, whether they are in the same or different Tracks,.select the appropriate Clips to Group together. Now choose **Clips** > **Group** from the Toolbar. When 1 Clip in a Group is selected, copied, deleted or moved, all Clips in its Group will be similarly selected, copied, deleted or moved.

To ungroup previously Grouped Clips to treat them separately, select the Group and choose **Clips**/**Ungroup**.

Groups can be nested.

Selecting a Range

To select a range click and drag in time and across tracks if desired. A range can contain areas of many clips across many tracks or an area of a single clip.

Making Edits

Once a Clip or Clips or a range is selected a wide variety of commands may be used to affect it / them.

Remember, the original audio **Media File** and **Master Clip** are not affected by edits in the **Timeline**.

Splitting Clips

Command **Edit > Split** (or **Ctrl + T**) makes an edit on the selected Clip(s) at the cursor position splitting it (them). If a region is defined within a Clip or Clips then this region is Split (edited) by using this command. Each split portion of the original **Clip**(s) now becomes a new, independent **Clip** in its own right.

Once a **Region** is marked on a **Clip**, simply clicking on the **Region** makes an edit. (same effect as the **Edit > Split** menu command.) This will split the **Clip** or **Clips** at the region boundaries. If a **Region** is across several **Tracks**, Edits will be made on all **Tracks** within the **Region**.

Holding down the **C** key changes the mouse pointer to a cutter. Edits (cuts) are made wherever the user clicks. To make an edit with the cutter on a range of clips at the same position, just select them before cutting.

Duplicate Selection

Holding down the **D** key while clicking on the selection then dragging to a new location duplicates the selected material and moves it.

Holding down the **F** key while clicking on the selection then dragging to another track (or tracks if the selection covers more than one track) duplicates the selected material and moves it locked in time.

Fades

The timing of a **Fade In** at the beginning of a Clip and a **Fade Out** at the end can easily be adjusted using the top **Control Point** on a **Clip's Trim Handles**. However, **Pyramix** offers much more precise and flexible means for adjusting **Fades**.

1. Click on a **Clip** to select it.
2. Right-click on the **Clip**.

Choose **Fade In** > **Edit...** from the main **Edit** or context pop-up menu (or **Fade Out** > **Edit...** as appropriate). Or choose the **Fade Editor Tab** in the **Project Management Panel.** The **Fade Editor** window will open. Please see **The Pyramix User Manual** for a full description of the **Fade Editor**.

Edit Command highlights:

Further **Edit**ing commands are to be found on the main **Edit** menu.

Undo

Pyramix keeps track of all edit decisions and operations so they can be undone if necessary. This menu item shows the name of the last operation. To undo this operation, simply click on the Undo (operation) menu item and the listed operation will be undone. Whenever an item is undone, it immediately shows up as the most recent item in the Redo list.

Undo History

Pyramix keeps track of the most recent edit decisions and operations and shows them here in a sub-menu. These are listed from the most recent at the top, to the oldest at the bottom of the list. To undo a whole block of operations, click on the name of the oldest operation and everything since that time (from that point in the list to the top of the list) will be undone. The name of the next operation in the list will be shown as the next Undo item, and all the items that have been undone are immediately added to the **Redo History** list. The size of the undo history is set to 32 steps by default, but it can be adjusted in the **Settings > General Settings : General** page.

Redo

If an operation has been undone using the **Undo** commands in this menu, the most recently undone operation will be shown here. To **Redo** the operation, simply click on **Edit > Redo** and the operation will be Redone. Whenever an item is Redone, it immediately shows up as the most recent item in the **Undo** list in this menu. The next edit operation carried out in Pyramix will then purge this item since the operation could cause a conflict with previous operations and therefore renders the **Redo** invalid.

Redo History

Pyramix keeps track of the most recent operations that have been undone, and shows them here in the **Redo History** sub-menu. To **Redo** a whole block of operations, click on the name of the oldest operation and everything since that time (from that point in the list to the top of the list) will be Redone. The name of the next operation in the list will be shown as the next **Redo** menu item, and all the items that have been Redone are immediately added to the **Undo History** list. The next edit operation carried out in Pyramix will then purge this list since the operation could cause a conflict with previous operations and therefore renders the **Redo** list invalid.

Delete

This command deletes the selected clip or region. When a selection is deleted, other material on the track behaves according to the current **Remove** mode setting.

Cut Cuts the current selection from the project and places it on the Clipboard. When a Selection is **Cut**, other material on the track behaves according to the current **Remove** mode setting.

Copy Copies the current selection from the project and places it on the Clipboard

Paste>

- **Paste to Cursor** Inserts the contents of the Clipboard starting at the current Playhead Cursor position. When the contents of the Clipboard is Pasted, other material on the track behaves according to the current **Insert** mode setting.
- **Paste Tail to Cursor** Inserts the contents of the Clipboard ending at I.e.before, the current Playhead Cursor position. When the contents of the Clipboard is Pasted, other material on the track behaves according to the current **Insert** mode setting.
- **Paste Sync Point to Cursor** Inserts the contents of the Clipboard with the first sync point in the Clipboard contents at the current Playhead Cursor position. Depending on where the first sync point is, the material pasted may start, end or straddle the current Playhead Cursor Position. When the contents of the Clipboard is Pasted, other material on the track behaves according to the current **Insert** mode setting.
- **Paste & Place** Opens the Placement Tool with extensive placement options.
- **Paste to Original TC** If the Clipboard contains a single clip, insert this at its original TimeCode *
- **Paste to original Timecode works differently with clips and Range Selections. If the Clipboard contains a single clip this will be pasted to its original time code. If the Clipboard contains more than one clip or a selection of a clip or clips this will be pasted to the time code at the beginning of where the selection was made on the next track(s) where there are no clips which would be overwritten.**
- **Paste to End of Selection** Inserts beginning of contents of Clipboard to end of current selection

Fill Selection This command will substitute the Clipboard contents for the selected clip or region

Replace Selection This command will substitute the Clipboard contents for the selected clip or region and ripple following clips if there's a length difference

Loop Selection This command will substitute a loop of the Clipboard contents for the selected clip or region without changing sync on the track. Very useful for extending effects to fit a given space.

Fit Selection This command allows inserted clips to be fit into specified regions on the timeline. This requires the Timezone Time compression/Expansion plug-in

Cut and Ripple Cuts the current Selection and places it on the Clipboard forcing a Ripple to occur on all affected tracks.

Paste and Ripple Inserts the contents of the Clipboard to the mouse cursor position forcing a Ripple on all affected tracks.

Paste to Cursor and Ripple Inserts the contents of the Clipboard at the current Playhead Cursor position, forcing a Ripple on all affected tracks.

Insert Silence Inserts silence (blank space) into the current selection, forcing a ripple on all selected tracks.

Navigation

Pyramix Virtual Studio offers the user a variety of ways of navigating around the Project Editing Panel.

Playhead Cursor Position

A vertical black line with a down pointing triangle at the top indicates the current **Play Cursor**, **Playhead** cursor or **Now** position within the **Project Editing Panel**. When a new **Project** is started, the **Playhead** is set at Zero (0).

The **Playhead** can either be static, with scrolling tracks, or moving, in which case the track display 'pages' when the boundaries are reached. (select with **View > Fixed Cursor while playing** or **View > Free Cursor while playing**. A further option, **View > Cursor Return after playing,** when selected, returns the **Playhead** to the start point when playback is stopped)

Time Scale Rulers

Pyramix is equipped with many Time Scale options. Each Time Scale has an associated **Time Scale Ruler** and **Tool Bar** which appears above the Time Scale Ruler(s).

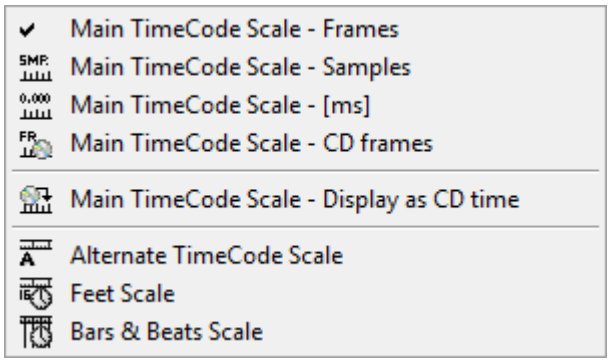
Main TimeCode Ruler

Near the top of the **Project Editing Panel** is a horizontal gray area with time code numbers. This is the **Main TimeCode Ruler**. On the left, above the Track headers, the Time Range, i.e. the length of the visible Timeline window is indicated.

The simplest way to move the **Playhead Cursor** within the **Project Editing Panel** is to position the mouse anywhere along the **Time Scale Ruler** and left-click. The **Playhead** will immediately move to the new position. You can also left-click the **Playhead Cursor** and drag it along the Ruler.

Context Menu

Clicking in the left hand, Header, area of a Time Scale Ruler pops up a context menu.


Main TimeCode Scale - Frames
Main TimeCode Scale - Samples
Main TimeCode Scale - [ms]
Main TimeCode Scale - CD frames
Main TimeCode Scale - Display as CD time
Alternate TimeCode Scale
Feet Scale
Bars & Beats Scale

Main TimeCode Scale Ruler context menu

The first six entries offer a choice of display modes for the Main TimeCode Scale a tick appears next to the option selected currently:

- Main TimeCode Scale - Frames
- Main TimeCode Scale - Samples
- Main TimeCode Scale - [ms]
- Main TimeCode Scale - CD frames
- Main TimeCode Scale - Display as CD Time

The remaining three entries add new Time Scale Rulers beneath the Main TimeCode Scale Ruler

- Alternate TimeCode Scale
- Feet Scale
- Bars & Beats Scale

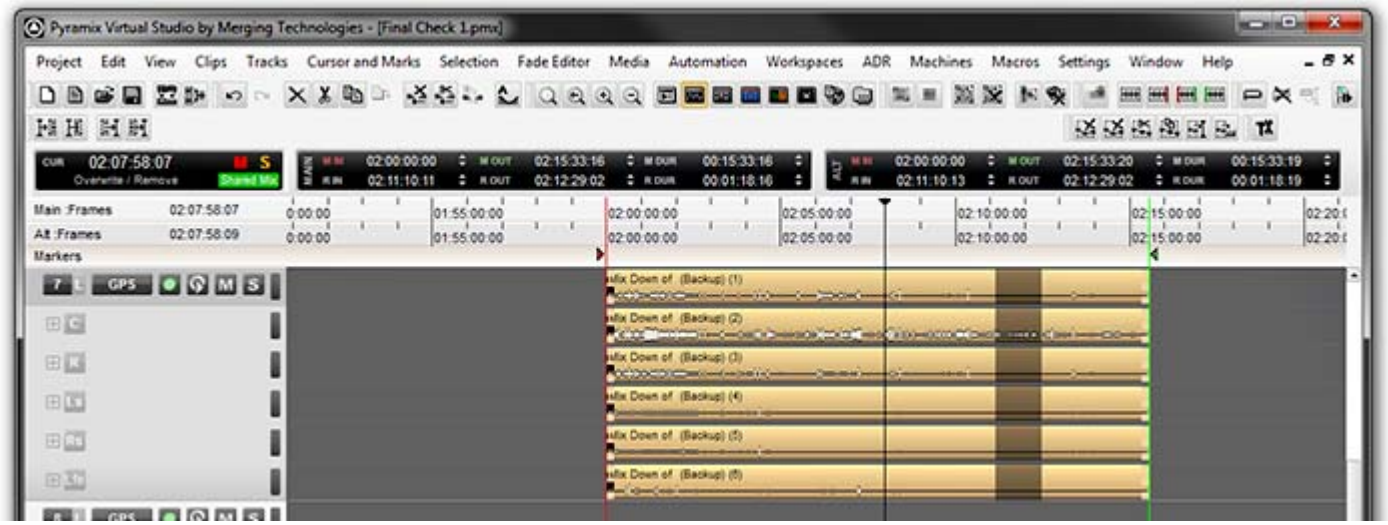
Fixed or Moving Playhead Cursor

These options are selected via the **View** pull-down menu. The **Playhead Cursor** can be static with the **Timeline** moving (choose: **Fixed Cursor while playing)** or the **Playhead Cursor** can move while the **Timeline** remains static, 'Paging' when the **Playhead Cursor** hits the screen edge. (Choose: **Free Cursor while playing**).

The third option is **Cursor Auto-Return after playing**. When this is selected with either of the other options, the **Playhead Cursor** will return to the point at which **Play** began when **Stop** is selected.

Cursor & Timescale Ruler Toolbars

Above the **Timescale Ruler(s)** and below the **Project Editing Panel Toolbar(s)** are the **Timescale Toolbars** and **Cursor Toolbar**. When several Timescale Ruler Toolbars are displayed together each Toolbar will wrap into two rows as shown here:


Pyramix Virtual Studio by Merging Technologies - [Final Check 1.pmx]
Project Edit View Clips Tracks Cursor and Marks Selection Fade Editor Media Automation Workspaces ADR Machines Macros Settings Window Help
CUR 02:07:58:07
Overwrite / Remove
Shared Mix
Main :Frames 02:07:58:07
Alt :Frames 02:07:58:09
Markers
GPS

Timescale Ruler Toolbars

Each Toolbar contains a number of Icons and TimeCode register boxes with increment / decrement **up** and **down** arrow buttons. The Cursor and Main Marker/Region Timescale Toolbars are associated with the main Timescale Ruler and Marker Tray. Other Timescale Toolbars appear by default when the Alternate Timescale, Footage or Bars & Beats rulers are visible. Any or all of these Toolbars can be Hidden/Shown using **View > Scales / Toolbars** and toggling individual Toolbars or **Hide All Toolbars**.

Increment / Decrement UP & DOWN Arrow Buttons

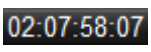
The **+** (plus) and **-** (minus) buttons to the right of the TimeCode registers increment or decrement by one unit per click of the smallest unit in the current register. E.g. Frames, Samples etc.

Modifiers

Click	**Frames**
Alt + Click	**Subframes**
Ctrl + Click	**Seconds**
Shift + Click	**Minutes**
Ctrl + Shift + Click	**Hours**
Ctrl + Alt	**Current Nudge Value**

Cursor Toolbar

Click here to locate to the current Playhead Cursor position with the Playhead Cursor centered in the Timeline.



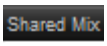
Current Cursor position register. Click to edit.

Global Mute indicator. When unlit no tracks are muted.

Global Mute indicator. When lit one or more Tracks are muted. Click on the lit incator to cancel all active Mutes.

Global Solo indicator. When unlit no Tracks are Soloed.

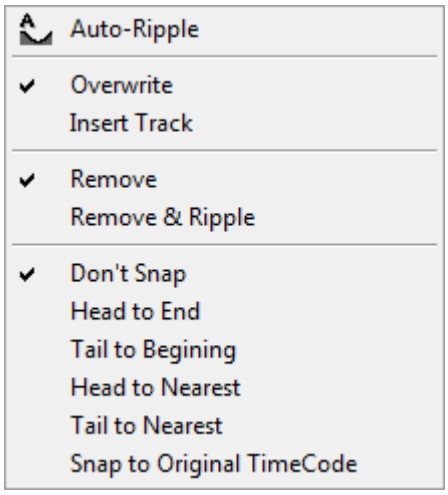
Global Solo indicator. When lit one or more Tracks is Soloed. Click on the lit indicator to cancel all active Solos.



When inactive, as here, the current Project's mixer is not shared with subsequently opened Projects.

When active, the current Project Mixer will be shared with Projects opened or created subsequently. **Please see: Mixer Sharing on page 223**

This area indicates the current Edit Mode. Clicking on it pops-up a menu:



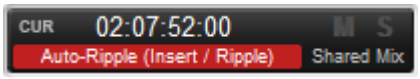
Timescale Ruler Toolbars

This shows the options selected currently with ticks. Click on menu entries to change the options.

Auto-Ripple	Toggles **Auto-Ripple** On or Off
Overwrite	When active Pasting a Cue(s) will overwrite any Cue(s) present on the target Track(s) for the duration of the pasted Cue(s).
Insert Track	When active Pasting a Cue(s) will split an existing Cue or Cues present at the Insert point to accomodate the Pasted Cue(s).
Remove	When active deleting a Cue or Selected Region leaves blank space. No subsequent Cues are moved.
Remove & Ripple	When active, deleting a Cue or Selected Region results in all subsequent Cues on the same Track(s) being moved forward by the same time as the time deleted.
Don't Snap	When active, moving a Selected Cue or Range simply moves it at will.
Head to End	When active, moving a Selected Cue or Range results in its beginning snapping to the end of the last Cue on the Track(s)
Tail to Beginning	When active, moving a Selected Cue or Range results in its end snapping to the beginning of the first Cue on the Track(s)

Head to Nearest	When active, moving a Selected Cue or Range results in its beginning snapping to the nearest Cue on the Track(s) or the Playhead Cursor or In/Out Marker.
Tail to Nearest	When active, moving a Selected Cue or Range results in its end snapping to the nearest Cue on the Track(s) or the Playhead Cursor or In/Out Marker.
Snap to Original TimeCode	When active, moving a Selected Cue results in it snapping to the Original Time-Code as stamped in the file.

Note: Whenever a mode is selected which can affect other Cues, e.g. **Ripple** then the label displayed in the Toolbar turns red.



Jog / Shuttle

Scrub Using the Middle Mouse Button

Audio can be scrubbed by holding down the middle mouse button while the cursor is in the Timescale area and moving the cursor left to scrub in reverse or right to scrub forward. The distance moved away from the current play cursor position will determine the relative playback speed. When the play cursor reaches the current mouse pointer position, or the middle mouse button is released, playback will stop.

Shuttle

The transport can be shuttled with audio output at up to 8 times speed.

Auto Jog

Where a physical controller with a jog / shuttle wheel is available, Pyramix can be set so that moving the jog wheel automatically enters Jog mode.

Settings

Jog / Scrub parameters are set in the **Settings > All Settings > Application > Jog/Chase** page.

Jog Settings

Jog Speed ceiling

Four Radio Buttons offer the choice of **1X**, **2X**, **4X** or **8X** nominal play speed.

Flywheel responsiveness and inertia

Responsive follows the actual movements as sent by the jog wheel. **Smooth** passes the actual movement through a smoothing filter. So, when the slider is set to **Responsive** the **Smoothing Filter** parameters have no effect.

For sound to picture work where tight sync to picture is required use a setting biased to **Responsive**. For a more pronounced flywheel effect choose a **Smooth**er setting.

The Middle position is a good starting point.

Jog - sensitivity [0.33] second(s) per revolution

Sets the time moved in one revolution of the jog wheel. Type the required value in the box.

Shuttle - sensitivity [2] revolution(s) for nominal speed

Sets the fraction of a revolution or number of revolutions required to maintain nominal speed. E.g. an entry of 0.25 will require a quarter of a turn clockwise to achieve nominal speed.

Navigate - sensitivity [3] revolution(s) to traverse the timeline

Navigate is silent jog mode. Sets the number of revolutions of the jog wheel required to traverse the visible time-line. I.e. the actual speed varies with the zoom setting.

Geared Jog mute when timeline view range is > 00:00:10:00

Audio will be muted when the Timline view range exceeds the value in the register.

Fine Jog sensitivity factor [ ]

Sets the fraction of the regular Jog Sensitivity Setting that will be invoked when **Fine Jog** is selected in the **Machines > Controllers** menu

Mouse Scrubbing Settings

There are two possible scrub modes, **Analog Tape Mode** and **Repeat Loop Mode** check the appropriate box for the required mode. The length of the loop in **Repeat Loop Mode** is related to the base sampling frequency so the loop will be 116mS long at 44.1, 88.2 and 176.4 kHz or 106ms at 48, 96 and 192 kHz.

Analog Tape Mode gives a similar response to 'reel-rocking' on an analogue tape machine.

Jog anyway

When lit, **Jog Mode** is used regardless of how much audio is visible in the **Timeline**

Shuttle when more than 10 [s] is shown in the Timeline

When lit, if there is more than 10 seconds of audio visible in the Timeline scrub will be in **Shuttle Mode**

Repeat Loop Mode continuously repeats a short loop starting at the cursor position.

Vari Speed Audio Quality

High when playing less than of equal to [6] track(s)

Best when playing less than or equal to [2] track(s)

MassCore : the varispeed quality is set automatically according to the current core load.

Native and Mykerinos : the playback quality is defined by the playback streams numbers set above.

Scrub Settings

Audio Quality

Offers a choice of **Standard** or **Improved**. The higher the quality chosen the greater the CPU load. Default is **Standard**.

Improved mode is more demanding in terms of system resources. This setting will be automatically overridden to **Standard** mode if more tracks than the number specified in the **Max simultaneous tracks** field are scrubbed at the same time.

Fast Speed Settings

F.FWD and REW nominal speed ratio [20]

Type in the box to set the nominal **F.FWD** and **REW** speed. (I.e. a value of **20** means 20 times sync play speed)

Transport Controls

The **Play Head Cursor** or the **Timeline** will also move in response to the transport control buttons on the strip at the bottom of the main **Pyramix Virtual Studio by Merging Technologies** window, or by using the separate **Transport** window controls (providing control over the Internal machine is selected). Note that the **Transport** Strip disappears when the **Transport** window is open, and reappears when the window is closed.

From left to right along the Transport strip, the most common controls are as follows:

- The **Rewind** button moves the Play Head at an accelerated speed backward through the Composition while it is being pressed.
- The **Play Selection** button plays the currently selected clip, clips or region.
- The **Play** button plays the Composition at normal speed forward from the current position of the Play Head. Play in reverse by holding the **Ctrl** key while pressing Play.
- The **Record** button puts Pyramix into Record mode, and creates a new recording to the disk on the Tracks previously armed for recording. The Play Head moves forward at normal Play speed during the recording.

- The **Fast Forward** button moves the Play Head at an accelerated speed forward through the Composition while it is being pressed.
- The **Stop** button stops playback of the Composition.
- The **Loop Play** toggle button puts Pyramix into a loop play mode, which continuously plays the Composition between a marked In and Out point.
- The **Shuttle Control** slider shuttles the Play Head forward (right) or backward (left). It scrubs the audio on all Tracks as it shuttles through the Composition. The farther the extent from the center, the faster the shuttle.
- The **Chase** button allows for synchronized locking of the Composition Play Head with an external time code signal, commonly known as **Chase** mode. See the **User Manual** for more information.
- The **Controllers** button toggles exterrnal hardware controllers on or off line.

Adjacent to the Controllers button, select **Internal** from the pop-up list to ensure you are controlling the Pyramix Composition Play Head and not some external device (I.e. an RS-422 playback machine).

Zooming and Panning

There are 2 kinds of zooming in the Project Editing Panel: horizontal or Time Scale zooming; and vertical or Track height zooming.

Time Scale Zoom and Pan

Zoom In and **Zoom Out** icons on the Toolbar zoom in or out at the current Play Head location.

Hold down the **Alt** key, then select an area of the Composition by clicking and dragging the mouse to the left or right. This zooms in horizontally on the selected area.

Similarly, an area of the Composition can be selected by clicking and dragging. Now the **Fit in window** icon from the Toolbar will automatically adjust the horizontal scale to fit the selected area inside the Project Editing Panel.

Keyboard shortcuts also exist for all these zooming actions.

The **Scrollbar** beneath the Tracks directly below the Time Scale bar allows the user to Pan horizontally left or right in the usual fashion.

Track Height Zoom

In addition to horizontal zoom, the user can easily increase or decrease the height of each Track within the Project Editing Panel.

The **1**, **2**, **4**, **8**, **16**, **A** buttons at the bottom left of the Project Editing Panel automatically scale the vertical Track size so that 1, 2, 4, 8, 16 or All (as many as possible given the vertical space) Tracks fit in the vertical space allocated to the Project Editing Panel.

The **Scrollbar** adjacent to these buttons allows for continuous adjustment of the Track height.

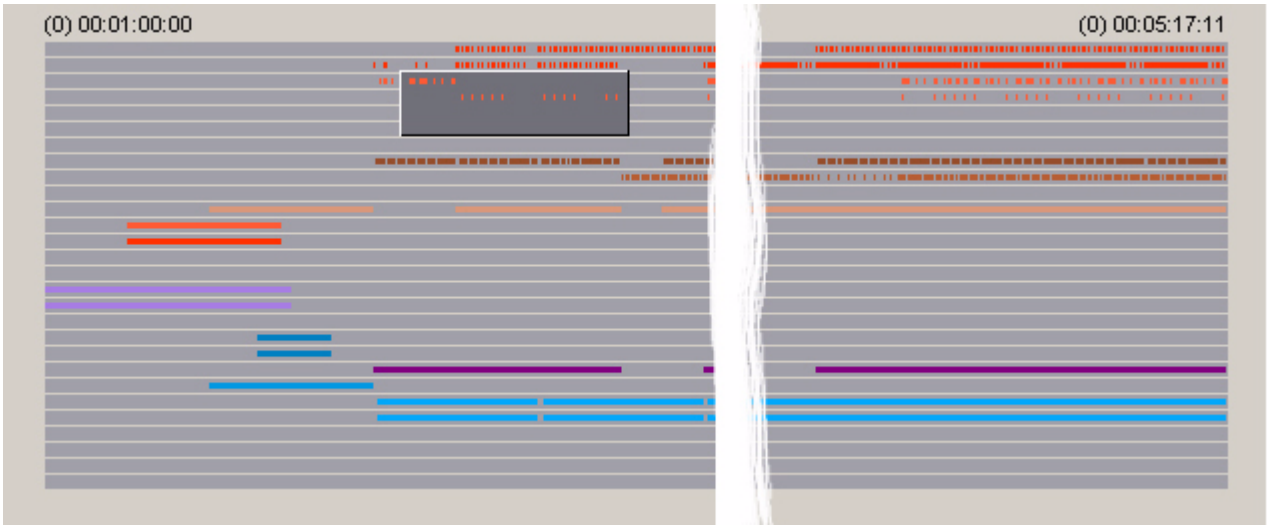
Double-clicking in the far left of a track header cycles through four preset track heights. **Mini**, **Medium**, **Large** and **Extra large**.

Scroll Wheel

It is well worth while using a three button mouse with a scroll wheel.

Scroll	Scrolls vertically through the tracks shown in the Project Editing Panel
Scroll + Ctrl	Scrolls the Timeline
Scroll + Alt	Zooms the Timeline timescale

The Overview



Overview Tab Display

The **Project Management Panel Overview Tab** offers a powerful and simple means of navigation around the **Project Editing Panel**.

Overview displays a graphic representation of the entire current **Composition**, showing the location of all **clips**. A shaded gray box indicates the location and zoom range of the part of the **Composition** which is currently displayed in the **Project Editing Panel**. **clip**s are shown as rectangles in the same color as their background on the Timeline.

Click anywhere in the **Overview** to center the **Project Editing Panel** display on that point. Click and drag on the shaded gray box to move the section of the **Composition** shown in the **Project Editing Panel** without changing the current horizontal zoom. The zoom range of the **Project Editing Panel** can be adjusted by dragging the edges of the shaded gray box in the **Overview**. An alternative method for adjusting horizontal zoom is to press the **Alt** key while clicking and dragging across the desired range for the zoom, just as you can do directly in the **Project Editing Panel** itself.

Markers or User Flags

Pyramix Virtual Studio allows for setting named and numbered **User Flags** or **Markers** at user defined points in a **Composition**. **Markers** can be used as convenient reference points for notes or other text, or as locations for Paste operations.

To Set a **Marker**, press **Ctrl-Shift** and click anywhere along the **Time Scale** bar. The **Marker** will appear as a small blue flag with a number in it. **Markers** are numbered consecutively in the order in which they are added. You can also add a **Marker** at the current **Play Head Cursor** position by choosing **Cursors & Marks** > **Add Marker to Playhead** from the **Toolbar**.

Markers can be selected by clicking on them. The **Marker** flag turns red to indicate it is selected. **Shift-Enter** moves the **Playhead Cursor** to the selected **Marker**

Use the **Markers Tab** in the **Project Management Panel** to view, name, **GoTo** and otherwise manage previously created **Markers**.

Right-clicking on a marker pops-up a menu with **Delete Marker** and **Rename Marker** options.

Using the Mixer

Mixer Components

Basic Strip

A basic mono channel strip contains:

On /Off toggle switch

Pan slider to Main output bus. In this case there is just a single stereo mix bus.

Numeric display of fader output level value, if cursor is over a fader knob shows fader gain. If cursor is over pan-slider, shows current pan position. May be clicked to directly enter a fader gain value.

Level Bargraph

Rotary Controls and Faders

Rotary Controls, sliders and Faders may be adjusted by grabbing them with the mouse and dragging. Rotary controls and sliders are adjusted by dragging left or right and faders by dragging up or down. Double-clicking a Fader or Rotary knob returns the value to the default. E.g. unity gain on a channel strip fader. Bargraph shows peak level

Buttons

Buttons on the main mixer surface are black when inactive. When active they 'light up'.

Solo solos the strip, **Mute** mutes the strip **Ctrl + Solo** cancels all other Solos

SA**F**E prevents the strip being muted by solo operations elsewhere. **Ø** reverses the channel phase. **PF** changes the metering position to Pre-Fader.

Delay A delay value (in samples) can be set in this box.

Input Clicking on **Input** pops-up a box with the choice of the strip taking its input from a physical connection or any output bus.

Logical Input and Direct Output Assignment

Right-click on the XLR icons to pop-up a drop down list of valid assignments.

Note: Direct Outputs must first be enabled in the **Configure** page.

Show / Hide

The small, grey **+ -** boxes on the right of the mixer surface toggle horizontal areas of the mixers surface shown full size or collapsed. They also pop-up context menus. (please see User Manual) Show / Collapse and Hide can reduce clutter by concealing unused controls. This is a mixer with all areas hidden:

Simple 8 X 2 stereo mixer Window with all areas hidden

Creating and Configuring Mixers

If one of the numerous mixer presets does not quite suit your application it is simple to modify an existing mixer, create one using the **Mixer Wizard** or design one from scratch. The Wizard can be started from an existing mixer by right-clicking anywhere on the mixer surface and selecting **Mixer > Settings > Wizard... Please see also:** **Mixer Wizard on page 31**

I/O Busses Explained

The total number of available output busses, regardless of the number of Mykerinos cards, is 128. The maximum number of inputs to Pyramix is also 128. However, it is perfectly possible, and permissible, to have more than 128 physical inputs and outputs connected to a Pyramix system. The **PS3 Control Panel Application** acts as a router to assign physical inputs and outputs to Pyramix logical inputs and outputs. For example: a system containing three Mykerinos boards, with MADI daughterboards has a total of 192. Any 128 of these may be routed to Pyramix inputs and any 128 Pyramix outputs (less the number of assigned **Internal Return Busses**; see below), can be routed to physical outputs.

Internal Return Busses

Some of the time slots on the HDTDM bus can be reserved to convey Aux or Master Output Busses back to input strips. In effect, these are internal send/return paths. To change the number of available Internal Return Busses, close Pyramix (if open) and launch the **VS3 Control Panel Application**. The number of Internal Return Busses can be set using the drop-down list box on the right of the screen. Click on the **OK** button to memorize the setting and exit the Window.

The number of **Internal Return Busses** you assign here will be available as possible channel strip sources in the mixer.

Input Strips

Input strips have the same function as the input strips of any standard mixing console providing level control, pan, mute, etc.

The following types of input strips are available:

- Mono input Strips
- Stereo input Strips
- MS decoder Strips - decode a Sum and Difference signal to standard stereo format

Groups

Master Group Strips - allow the grouping of faders of several mixer strips. Analogous to VCA grouping. When a group or groups are added (from the mixer contextual menu **Settings > Add Strip > Group**) A group button for each group created will appear below the strip name box on each input strip. When selected, the associated Group strip will control the grouped input strips if the **On** button is lit on the Group strip.

Mixing/Monitoring/Aux Buses

These are the summing buses where signals from the mixer input strips can be routed to.

Mix Bus

A mix bus is the destination for the final product of your mix. The outputs of a mix bus are usually routed to a master machine to record the final mix. They can also be routed via **Internal Return Busses**. This enables the final mix to be recorded in Pyramix.

Mix Buses are available in several formats:

Mono Mix

Provides a single mono output. Any input strip can be routed to it.

Multiple Mono Mix

Provides several mono outputs. Any input strip can be routed to any or all of them

Stereo Mix

Provides a single stereo output. Any input strip can be routed to it

Multiple Stereo Mix

Provides several stereo outputs and allows any input strip to be routed to any or all of them

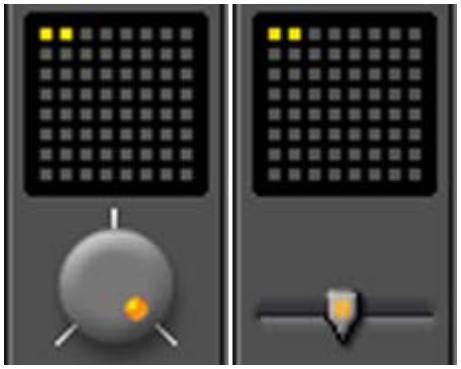
Surround Mix - 5.1 format

Multiple Surround Mix - provides several surround outputs and allows to route any mixer strip onto any of them.

> **Note:** Unlike mono and stereo multiple busses, input strips can only be routed to ONE 5.1 destination of a multiple surround bus. This reflects their normal use. E.g. a common set-up will have three surround busses for Dialogue, Effects and Music Stems. A, B and C. Each Input strip is routed to the appropriate surround bus by clicking on the A,B or C selector buttons.
>
> When the multiple surround bus is selected as the Surround Monitor Bus source (Its **Select Mix** button is lit) All three surround busses are summed for monitoring.

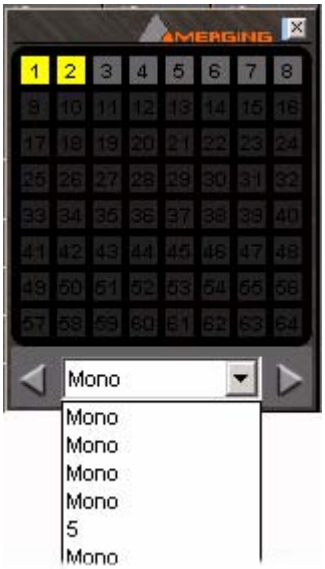
Multiple Mix Busses

When a mono or stereo multiple mix bus is added to the mixer a routing matrix box appears in the input strips with a send level control (mono) or pan control (stereo).



Mono Mix bus matrix **Stereo Mix bus matrix**

The 8 by 8 matrix gives access to up to 64 output busses. Routing is shown by lit crosspoints. Double clicking the matrix opens the routing matrix window.



Valid choices are shown in gray. Once the window is open, other input channels can be route by either selecting them from the drop-down list or using the **<** and **>** arrows to step across the mixer surface.

Aux Bus

Mono and **Stereo Aux busses** provide a way to create 'auxiliary' mixes which are normally used to provide headphone or cue mixes for musicians, or to send signals to effects such as reverbs, delays, choruses, etc.

Dim Switch

The **dim** switch in Monitor Bus strips attenuates the Monitor Bus ouput(s) by 20 dB active.

Solo In Place/Mono Switch

Toggles between **In Place** (stereo) Solo when lit or **Mono** solo monitoring. (Mono and Stereo busses only)

External Effects

Any Pyramix **Bus** can be routed to any physical output. Thus, an **Aux** can be routed via a physical output to an external effect. The output of the external effect is simply brought back into Pyramix via one of the physical inputs.

Configuring a Blank or Existing Mixer

Configuration of the mixer control surface can be accomplished via contextual menus or more easily using the **Configure** page. (please see the User Manual) The precise options available will depend on where you click on the mixer. If you wish to affect the entire mixer, right-click on the top bar of the Mixer window. To change options for a Bus, right-click on a blank area of the Bus strip. Similarly, for a channel input strip, right click on a blank area of the Strip. Right-clicking within a function block adds menu entries to the top of the list, relevant to the specific block.

Synchronized Creation/Deletion of Tracks/Strips

Note: When Creating, Deleting or Moving Strips in the Mixer Configuration page (or with the right mouse button context menus) the connected Tracks are also Created/ Destroyed or moved accordingly.

- This behavior will apply when the **Tracks > Synchronize Tracks & Strips** is checked.
- When Strips are Created or Moved the Tracks are Created or Moved seamlessly.
- On Deleting a Strip or Strips, only empty Tracks are destroyed. Tracks containing Clips are preserved, disconnected and set to minimum size.

Adding Strips

Input Strips, **Output Buss** and **Group** strips can be added to the mixer as required.
Right-click anywhere on the **Mixer** window, choose **Strip** > **Add** and select the appropriate type of strip to add or right-click anywhere on the **Mixer** window, choose **Bus** > **Add** and select the appropriate type of bus to add.

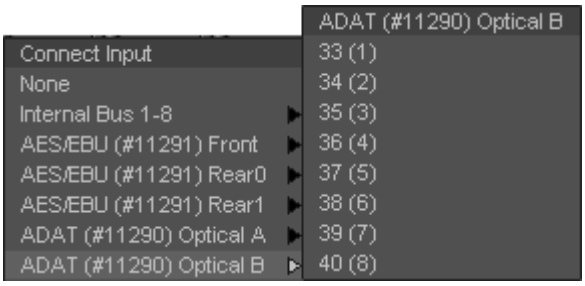
Removing Strips

To remove a given input strip, bus or group, right-click directly on it and choose **Strip** > **Remove (Strip, Bus** or **Group)** as appropriate.

Mixer I/O Assignments

To or from physical I/O

To change **I/O** assignments to or from physical **I/O** or the **Internal Return Busses,** click on the appropriate **XLR icon**. A pop-up appears with a list of all valid choices.



From Tracks

Note that several tracks may be routed to the same mixer input strip. Tracks are assigned to mixer input strips either automatically or manually from the **Track Header**.

Adding Plug-ins

Native Plug-ins

These include the eq and dynamics found on a conventional hardware mixer's channel strip. To add a native plug-in right-click with the mouse cursor over the strip where the plug-in is to be added. If you right-clicked in the effects area of the strip select **Effects > Add**. If you clicked somewhere else, select **Add Effect**. Select an effect from the drop down list. It will appear in the strip.

VST Plug-ins

VST Plug-ins can be used in the same way as Native Plug-ins.

For much more detail on Plug-ins please see the **Pyramix User Manual**

Mixer Strip Controls

When Native VS3 Plug-ins, VST Plug-ins and External Inserts are instantiated in mixer strips each instance has a block of one or two buttons. The full Plug-in name or External Insert pops-up along with the required delay compensation when you hover the mouse pointer over each block:

Buttons

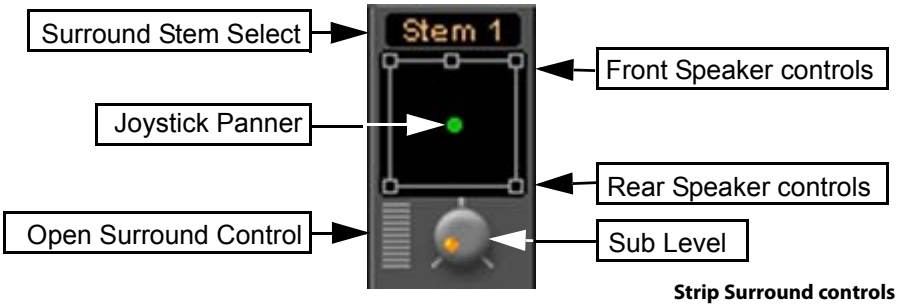
Each block has one or two buttons. The left-hand, yellow button is lit when the effect or insert is switched on. Switching an effect or insert off removes it from the signal chain and this may well be audible.The right-hand, red button indicates that the effect is **bypass**ed when lit. Bypassing an effect retains the same delay as when the effect is active. Further, well behaved effects will continue to calculate internal parameters when bypassed making seamless switching possible.

When **Full Delay Compensation** is selected, Plug-in effects that correctly report their latency will have their delay compensated. This delay is maintained when the plug-in is in **bypass** mode.

For full details of the advanced Delay Compensation features please see the **Pyramix User Manual**.

Mixer Surround Components

When a **Surround Bus** is added to the mixer an surround panner appears at the top of the **Input Strips**



Strip Surround controls

Surround Stem select

If a Multiple Surround Bus has been added to the mixer **Stem 'X'** appears at the top of the strip. Click on the box to select the stem you wish to route the strip to.

Speaker Controls

Double-clicking on any of the Speaker Controls toggles the mute on/off of the selected surround channel (also muting any audio routed to that surround channel output). When a channel control is muted, it is no longer displayed on the Mixer Input Strip.

Joystick Panner

Determines the position of the source within the surround sound space. To position it, simply left-click on the control and move it to the desired location. Doubleclicking on this control will automatically center it.

Sub Level

Determines the level sent to the Sub (.1) output.

Stereo Input Strips

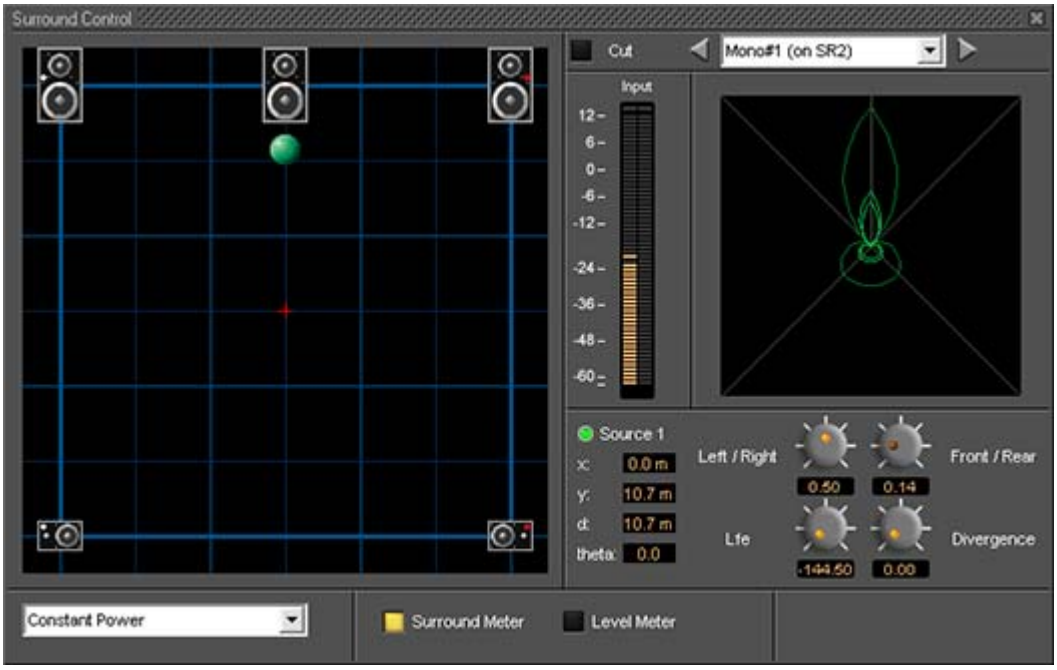
The Surround Sound Panner Position control behaves slightly differently in a Stereo Input Strip.

Notice there are now two independent position controls and two independent Sub sends. One for each input channel.

Open Surround Control

The **Surround Control** window offers far more information and a greater degree of control over all the surround panning parameters than could be shown on an individual Input strip.

Surround Control window



Surround Control floating Win-

Options available will depend on whether the Mixer Channel is single source (mono) or 2 sources (stereo). For an in depth description of all the functions please see the User Manual.

Position/Speaker Control

When a single source is used, the Position Control is displayed as a green dot on a grid with 5 speaker icons. Each speaker icon represents a Surround Speaker Position (L, C, R, SL, SR). The position of the Green Dot determines the position of the source within the surround sound space. To position it, simply left-click anywhere within the surround sound space. To position it, simply left-click on the control and move it to the desired location. Double-clicking on the Green Dot automatically centers it.

Surround Panning Algorithm

The drop down list gives a choice of panning algorithms.

Constant Gain

Allows the surround panning to preserve a constant gain sum on all speakers wherever the Position Control is placed.

Constant Power

Allows the surround panning to preserve a constant power sum on all speakers wherever the Position Control is placed.

Strip and Bus Tools - Plug-ins

Eq, Comp/Limiter/Expander

Strip and Bus Tools are a quick and efficient way of adding the Equalization and Dynamics (compression and expansion) functions commonly found on hardware consoles to channels and busses. Strip and Bus Tools are particularly economical with DSP processing power. Each processing block may be switched 'into circuit' individually. Blocks which are not 'in circuit' do not use DSP resources.

Difference between Strip Tools and Bus Tools

There is only one difference between Strip and Bus Tools. Bus Tools have a sophisticated Limiter with **Look-ahead** and **Delay Compensation** where Strip Tools has a Compressor.

Both may be freely used in Strips or Busses if the need should arise for a limiter in an Input Strip or a Compressor in a Bus.

Modules

The Strip and Bus Tools plug-ins consist of several **Sections** or modules. Each **Section** has a title bar at the top containing an **On/Off** switch for the **s**ection and a control triangle which toggles between showing or hiding the section.

Display Options

Multiple instances of the Bus Tools plug-in are displayed in one large window. Right-click onto the window title bar of the plug-in to open a menu offering some general display options for the Strip Tools plug-ins:

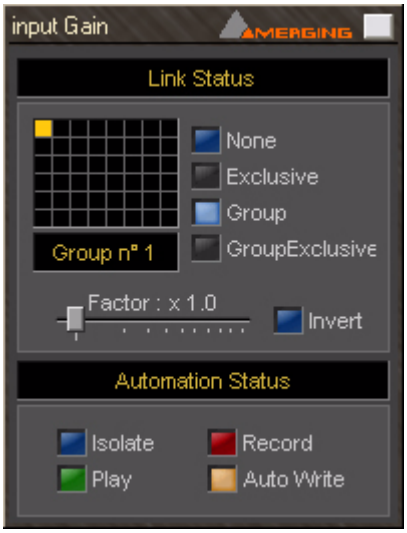
Strip Tools - General Display Options

This menu allows you to either directly select the number of strips displayed in the plug-in window, or to increment/decrement this number by one.

Linking Strip-Tools controls

Any choice of Strip Tools controls can be linked together. When you move any of the controls which is a member of a link group, all the other members of the group also move. There are 48 link groups for linear/rotary controls and 48 link groups for switches.

To add a control to a link group, right-click on the knob or button to display its **Link Status** and **Automation Status** pop-up window. E.g. this is the pop-up for an input gain control.:



Strip Tools - Automation Status

Group assignment mode buttons

These four buttons define the link mode of the control. Four choices are available:

None — The control is not a member of any group.

Group — The control is a member of the selected group. When you move (or switch) this control or any other control which is a member of this group, all the members of the group will move (or switch) along with it.

Exclusive — This mode is only available for switches. With this mode selected, when this switch is on, all the other members of the group will be switched off.

Group Exclusive — This is a mode which has a superior effect on all groups which are set to Group Exclusive. When any of the groups which are set to Group Exclusive is switched on, all the other groups set to Group Exclusive will be switched off.

Grouped controls are indicated by a yellow **L** in the corner of the control 'block'.

Factor X Slider — Works only on continuous (rotary or linear) controls. It determines the gearing of this control in relation to other members of the group and vice versa. E.g, assume the input gain of strip tools #1 and the input gain of strip tools #2 are both assigned to group one. The scale factor of the gain of strip tools #2 is set to 2. Now when you change the gain of strip tools #1 by 1 dB, the gain of strip tools #2 will change by 2 dB's.

Invert — Also works only on continuous controls. It inverts the effect of the movement for this control caused by another group member or vice versa. E.g, assume the input gain of strip tools #1 and the input gain of strip tools #2 are both assigned to group one. The invert button of the gain of strip tools #2 is on. Now when you increase the gain of strip tools #1 by 1 dB, the gain of strip tools #2 will diminished by 1 dB.

Sections

From top to bottom, Strip Tools contains the following Sections:

Input Level

This section contains the input level control and shows the name of the mixer strip this instance of the plug-in is assigned to.

Dynamics

This section contains a compressor. It can be switched, as shown here, to act as a decompressor.

Expander

This is a downwards expander. It can also be switched to act as an upwards expander.

Equalizer

This is a five band fully parametric equalizer. Each band can be switched to high or low pass, shelving or peaking characteristics.

Output

This section controls the output level of the strip tool and also offers automatic gain make up for the compressor.

Common Features

Each Section or module of Strip and Bus Tools has a number of controls in common.

Title Bar

A text description of Section's function, e.g. **Input**, **Dynamic** etc. Also contains:

Show/Hide triangle

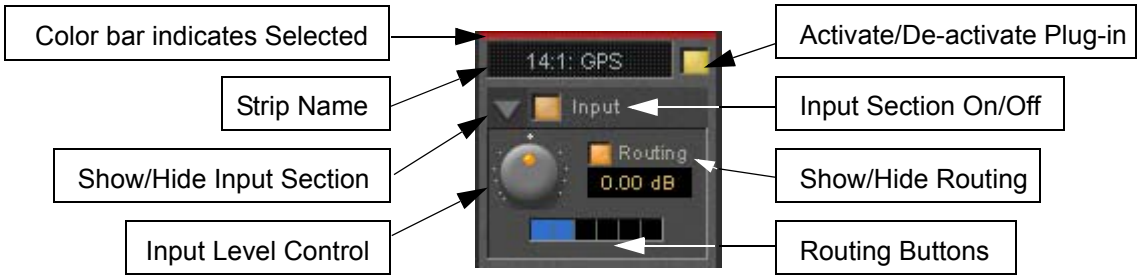
At top left of every Section a grey triangle toggles between showing or hiding the section. Clicking a triangle with **Shift** held down opens the Section (If hidden) and hides all other Sections. Clicking a Section with **Ctrl**. held down opens all Sections.

> **Note:** Sections remain active when hidden.

Section On/Off Button

Between the **Show/Hide** triangle and the Section **Title** is the **On/Off** button for the Section.

Input Section



Strip Name

Displays the name of the strip the plug-in is assigned to. The name for the plug-in can be changed by double-clicking on the strip name, then typing in a name and hitting the **Return** key to confirm. If a plug-in name is changed in this way, subsequent changes to the parent mixer-strip name do not affect the plug-in strip name. To recover the name of the parent strip, simply remove the strip name.

The strip name is saved with presets and within Pyramix projects.

Activate/deactivate plug-in

This button switches the entire Strip plug-in on or off. Note that when the plug-in is switched off, it doesn't consume any DSP power.

Show/Hide input section

Input section on/off

Input level control

Adjusts the input level over a range of -48 dB to +48 dB.

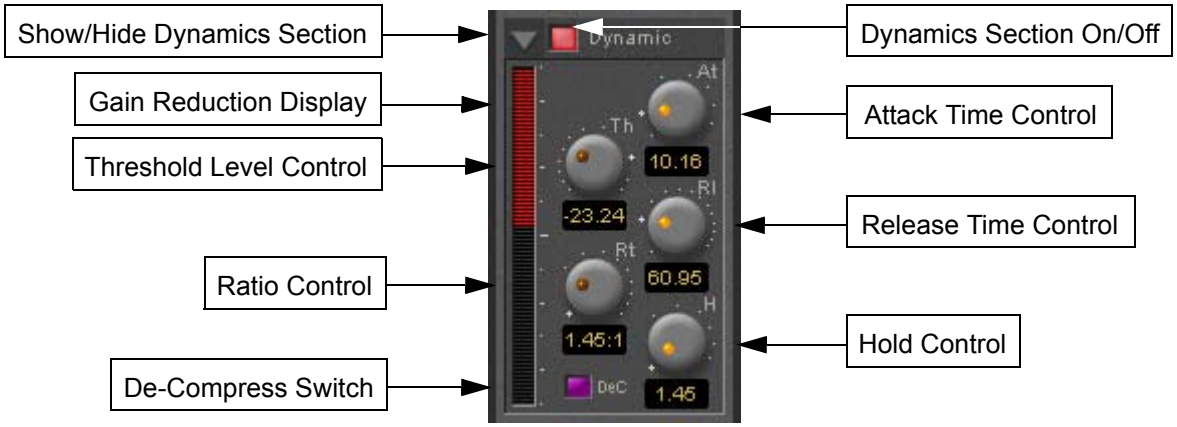
Show/hide Routing

By default Routing buttons are hidden. This button toggles between Showing and Hiding the Routing Buttons. Routing remains active when hidden.

Routing Buttons

Determine which audio streams running through the strip will be processed by the plug-in. The number of buttons depends on the number of steams controlled by the strip. Currently this means one for a mono input channel or two for a stereo input channel but will be 8 for a 7.1 input channel. Streams which are not selected will be left untouched.

Dynamics section



Show/Hide Dynamics section

Dynamics Section On/Off

Gain reduction display

The bar graph shows the gain reduction/increase generated by the **Dynamics Section** or by the **Expander**. The range of the display can be switched between +-10 or 20 dB by clicking on the bar graph. Scale markings in 1dB increments on the right-hand side of the bar graph make it easy to see if the range is 10 or 20 dB.

Colors are used to denote a gain reduction or increase generated by either the compressor or the expander:

- Gain reduction by the Compressor is displayed in **Red** from top to bottom.
- Gain increase by the De-Compressor is displayed in **Pink** from bottom to top.
- Gain reduction by the Expander (normal or inverse) is displayed in **Green** from bottom to top. With the compressor in inverse mode, the gain reduction of the expander is displayed in **Green** from top to bottom

Threshold Level Control

Sets the level at which the compressor begins to act. If the input signal level exceeds the **Threshold Level**, the gain is reduced (or increased in De-Compressor mode) in proportion to the setting of the ratio control.

Ratio Control

Determines the proportion of gain reduction (or increase) for signals above the threshold level. If, for example, the ratio is set to 2.00:1, in Compressor mode, if the input level rises by 2dBs above the threshold level, the output level will only rise by 1 dB.

Attack Time Control

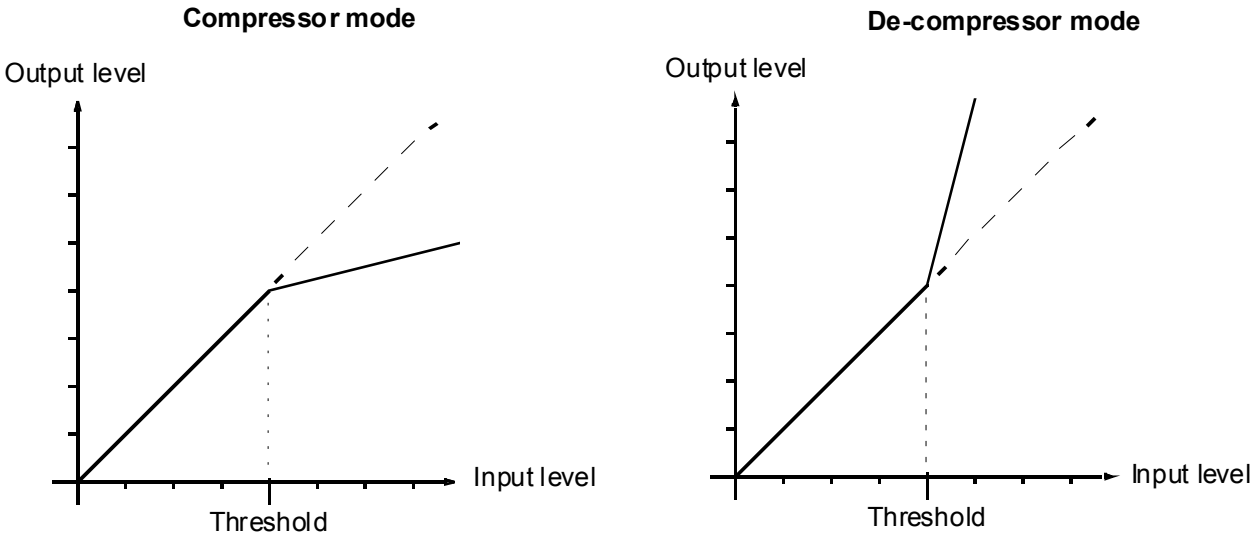
Controls the time the compressor takes to react when the input level exceeds the **Threshold Level**. The lower the attack time, the faster the reaction.

Release and Hold Time controls

These two parameters work together and control the amount of time the compressor takes to react when the input level is above the threshold level and starts fall. During the hold time the gain of the compressor remains constant. After the hold time the gain of the compressor is changed at the rate set by the release time. The lower the release time, the faster the reaction.

De-Compress Switch

Switches the compressor between the compress and the de-compress modes.



In compressor mode, when the input level exceeds the threshold level, the gain is reduced according to the setting of the ratio control. In de-compressor mode, when the input level exceeds the threshold level, the gain is increased according to the setting of the ratio control.

Expander Section

Show/hide Expander section

Dynamics section on/off

Threshold Level Control

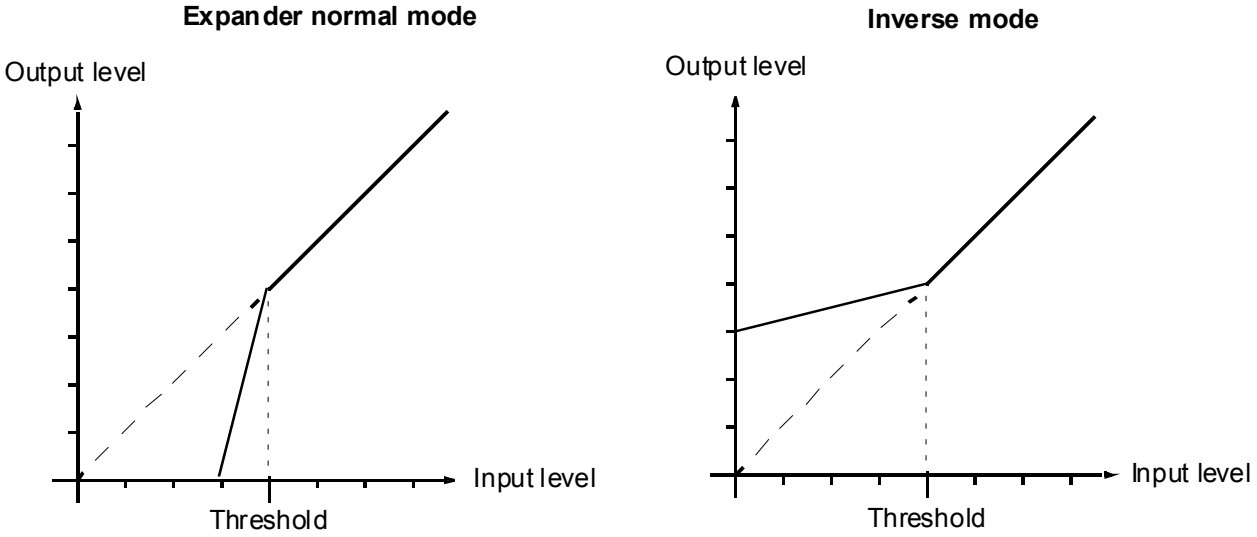
If the input signal level falls below the threshold level, the gain of the expander is reduced (or increased in inverse mode) according to the setting of the ratio control.

Ratio control

Determines the proportion of gain reduction (or increase) for signals below the threshold level. If, for example, the ratio is set to 2.00:1, in normal mode the output level will be decreased by 2 dB if the input level is decreased by 1 dB below the threshold level.

Inverse switch

Switches the between normal and inverse expander modes.

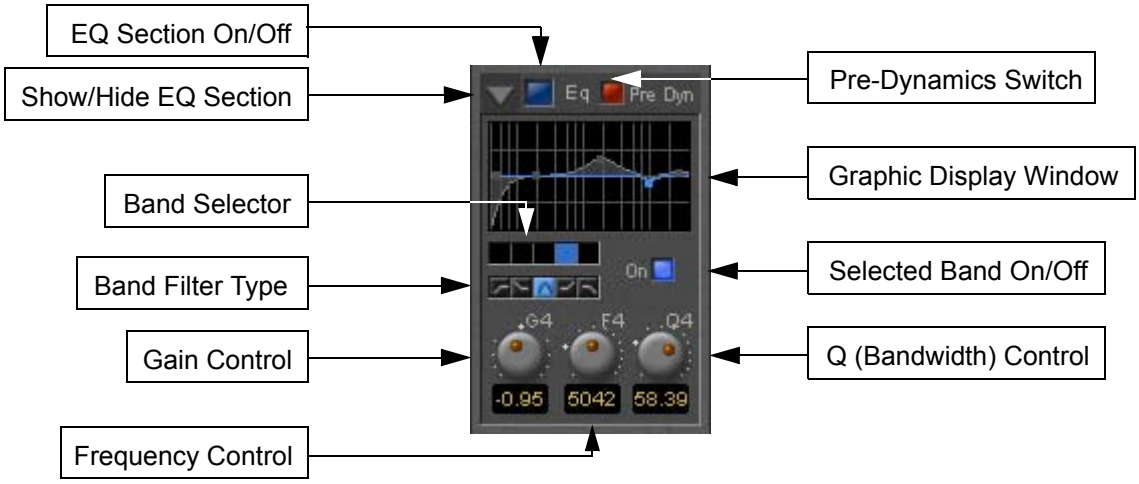


Attack/Release/Hold controls

The **Expander Section** uses the settings of the **Attack/Release/Hold** controls in the **Dynamics Section** to control it's timing.

Equalizer section

A fully parametric five band equalizer. Each band covers the entire frequency range from 20 Hz to 20 kHz (or higher, depending on the sampling rate of the project) and can be switched between peaking, high or low shelving and low-pass or high-pass characteristics. Each of the five bands can be switched off. De-activated bands do not consume DSP power.



Show/ Hide EQ Section

EQ section on/off

Pre Dynamics Switch

This switch offers the option to the switch the EQ before the dynamics section. By default the EQ is after the dynamics section.

Graphic Display Window

This small window displays the settings of the currently selected EQ band in blue color and the resulting curve of the whole EQ section in gray color. You can click and drag directly onto the handles (the small blue or gray points) of the EQ bands to change the settings within the graph window.

Double-click anywhere in the window to open a bigger version. Please see **The Big Graph Window on page 65**.

Band Selector

Click onto one of these five buttons to select the band to be manipulated by the Gain, Frequency and Q control underneath. A band gets also selected if it is manipulated in the small or big graph window.

Selected band characteristics

These five buttons determine the characteristics of the selected EQ band. The choices from left to right are High-Pass Filter, Low Shelving, Peak, High Shelving and Low-Pass Filter.

Selected Band On/Off

Switches the selected EQ band on or off. By default the five bands are switched off in order to economize DSP power, so don't forget to switch an EQ band on before you can hear what it is doing.

Gain Control

-24 dB to +24 dB, boost and cut.

Frequency Control

The range for each band is depending on the sampling rate of the project:

- For sampling rates up to 48 kHz the frequency range of each band is 20 Hz to 20 kHz.
- For sampling rates up to 96 kHz the frequency range of each band is 20 Hz to 40 kHz.
- For sampling rates up to 384 kHz (e.g. DXD mixing) the frequency range of each band is 20 Hz to 80 kHz.

Q (bandwidth) Control

The range for the Q parameter is 0.2 up to 100. A Q of 0.2 results in a very wide bandwidth, a Q of 100 will give an extremely narrow notch.

Output Section

Show/ Hide Output section

Output section on/off

Output Level control

Adjusts the output level over a range of -48 dB to +48 dB.

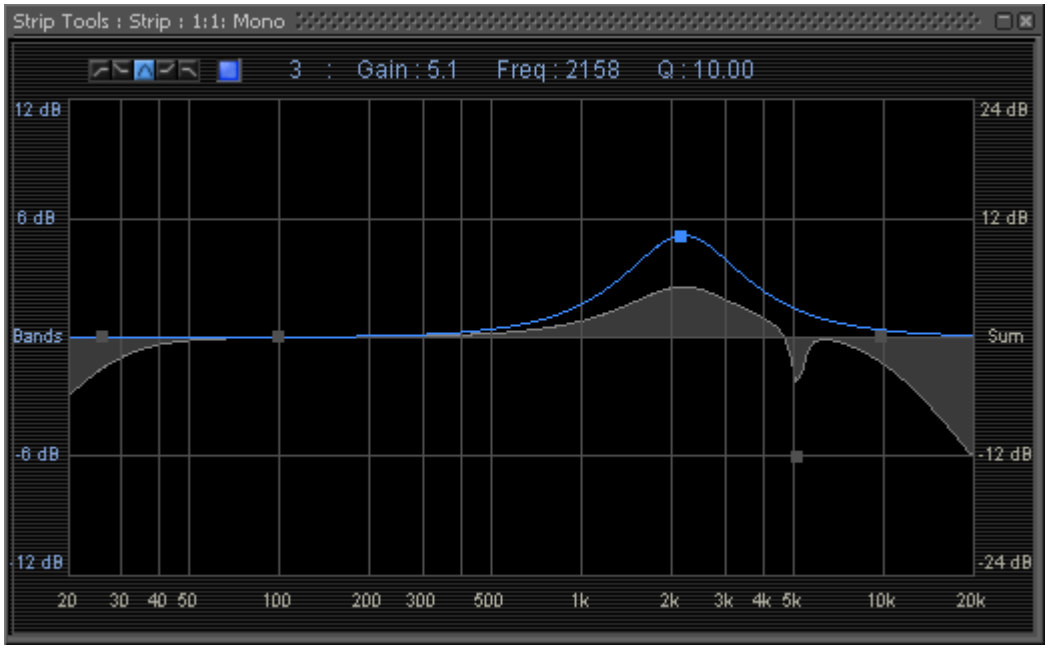
Automatic Gain Make Up switch

When lit, Output gain is automatically adapted according to the settings in the **Dynamics Section**. In this case the **Output Level Control** will be grayed out and inaccessible.

The Big Graph Window

The big graph window opens when you double-click the small graph window inside the **EQ Section**. The current settings of the selected EQ band are displayed as a blue line and the resulting overall EQ curve is displayed as a gray shaded area. Frequency and Gain parameters of each of the five bands can be altered by clicking on a band's

handle and dragging with the mouse. Handles of bands which are not selected are displayed as small gray squares. Grabbing and drag a handle selects the band.



Big Graph floating Window

The frequency response display uses two separate gain scales. The left hand, blue scale shows the scale used for individual bands. The right hand, gray scale shows the scale for the overall EQ curve. Both scales automatically adapt their range according to the settings of the curves they apply to. The range of the left and the right scale my be different. The ranges for the individual bands can be either +/- 6 dB, +/- 12 dB or +/- 24 dB, but the scale for the overall curve may go up to +/- 72 dB.

The upper area of the **Big Graph Window** provides an **On/Off** switch and buttons to select and indicate the characteristic (High-Pass, Low Shelf, Peak, High Shelf or Low-Pass) for the selected EQ band together with numeric displays of Gain, Frequency and Bandwidth.

Frequency and Bandwidth setting.

Shortcuts

- Double-click on a handle to reset the gain of this band to unity.
- The **Tab** key switches between EQ bands.
- Clicking and dragging a handle with the right mouse button alters the Q (bandwidth) of this band.
- Hold the **Ctrl** key while dragging with the left mouse button to lock the gain parameter and only change the frequency.
- Hold the **Shift** key while dragging with the left mouse button to lock the frequency parameter and only change the gain.

Bus Tools

Bus Tools are very similar to **Strip Tools** but are specifically designed to be inserted into busses rather than channels. **Bus Tools** combine the most frequently used 'mastering' processing blocks you find on the output busses of a mixing console in a single plug-in, including an advanced limiter. Like Strip Tools multiple instances of the Bus Tools plug-in are displayed in one large window. The number of instances displayed is user selectable.

IMPORTANT! Pre-Anticipation (PA) and Delay Compensation (DC)

Delay compensation adds a delay determined by the Pre-Anticipation delay setting to all channels passing through a Bus Tools plug-in NOT selected for processing.

If two or more Bus Tools are inserted in a Bus with PA & DC on, the delay times of each Bus Tools will add together for all channels:

Simple Mixer Automation

Pyramix Virtual Studio supports several different types of mix automation, including both continuous and snapshot automation of Mixer levels, pans, effects, etc. See the **Pyramix User Manual** for more details on these various kinds of automation. The following describes a simple kind of automation.

At the bottom right side of the main Pyramix window you will see **Off**, **Play** and **Write** buttons. These are the master automation control buttons.

To record Mixer automation: simply click the master automation control **Write** button. Now ANY changes you make to controls in the Mixer armed for automation, will be recorded. Changes can be made either in real-time in Play mode, or by cueing the Play Head Cursor to a certain point and carefully adjusting the desired Mixer parameters.

To play back without changing a previously recorded Mixer automation, simply press the master automation control **Play** button. Now any previously recorded Mixer automation will be played back.

To turn playback or writing of recorded Mixer automation off, just press the **Off** button.

Automation passes can be reviewed and undone/redone in the Automation Tracks window. You can open this panel with the **Automation > Automation Tracks**.

Mixing Down Projects

Exporting a Composition to a File

Once you have finished editing your **Composition**, the complete **Composition** or any selected area can be exported to an audio file (or files). This is really the same as mixing down the **Composition** to a file instead of to an audio output.

1. Choose **Project** > **Mix Down** to open the **Mix Down** window.
2. In the **Target Settings** section, type in an appropriate file name under **Record Name**; choose the folder to which the file will be saved from the **Media Folder** drop-down menu (only previously mounted folders will be available as options); choose the bit depth /word length from the **Resolution** drop down; leave the **One file per track** box **unchecked** to make a single multi-track audio file, or click it to generate separate audio files for each **Track** and choose the appropriate export file type from the **Format** pop-up list.
3. In the **Record** section, choose to export the **Whole composition**, or the area between the **In** and **Out** Markers with **Between Marks** or a previously made **Region with Selection** by clicking the appropriate radio button.
4. Choose the appropriate output bus as the source for the exported file. All output busses configured in your **Mixer** will be available in the **Mix Source** list box.
5. Click the **Mix Down** button to begin the process.

Archiving Projects

Menu: **Project > Archive** This function copies the project and all used media to a single location. Optionally all media can be **Consolidated**, and referenced libraries can be archived as well.

CD Mastering

Quick CD

Making a simple CD from a bunch of Clips or Master Clips in a Library or Media Management is a lot quicker to do than describe. Here are the detailed steps:

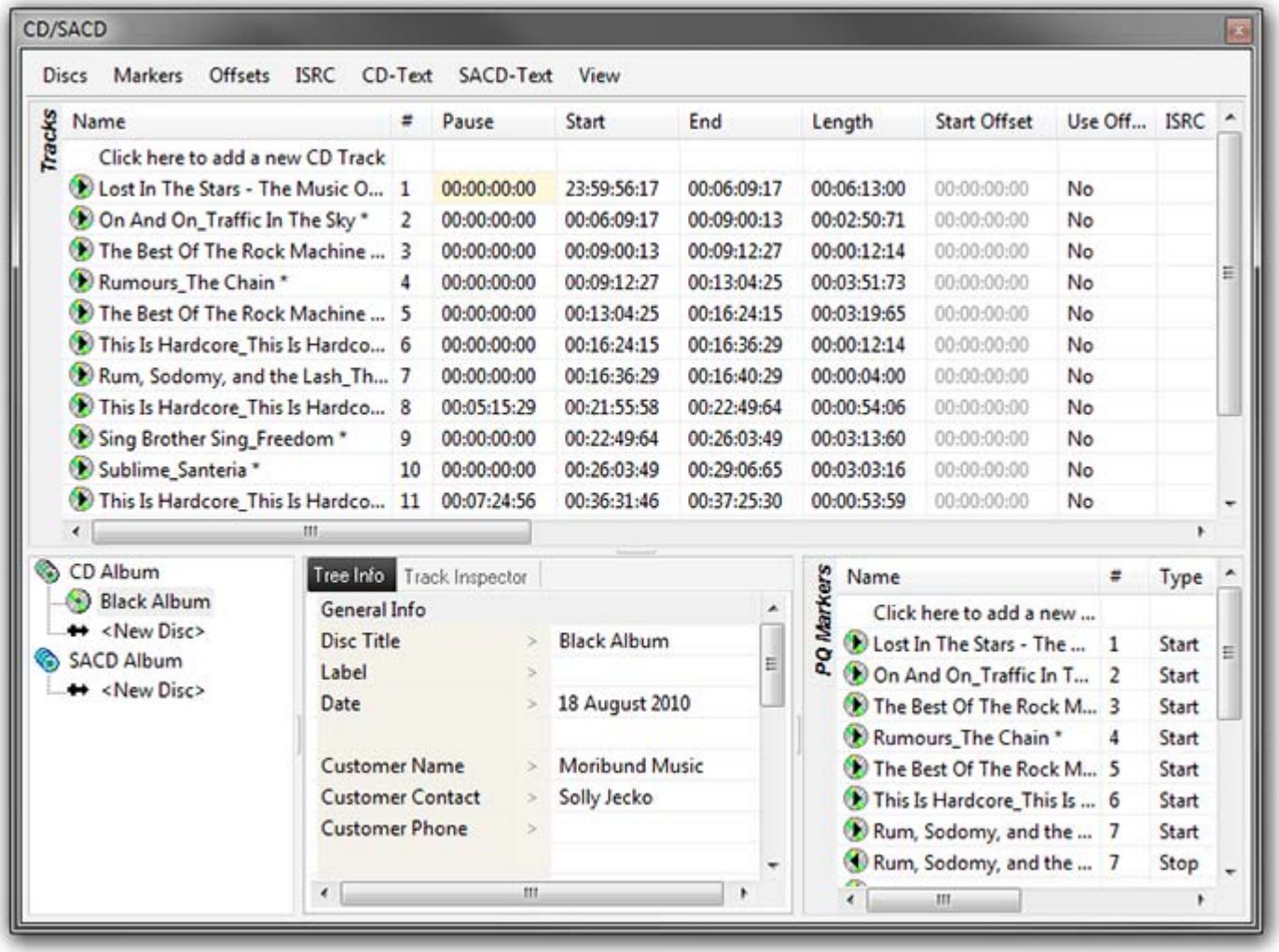
Assemble the Material

1. Open a new project, 44.1kHz with bit depth to suit the original material.

2. For speed, select a suitable simple Mixer Template (E.g. **Mix 8 X 2 (Stereo)**
3. Open the Media Management or Library window where the material is located.
4. If the original material is not already at 44.1kHz, use **Convert > Quick Convert > Samplerate Converter** to make 44.1kHz versions.
5. Turn on **Edit > Auto-Ripple** and **Edit > Edit Mode > Snap > Head to nearest**
6. Place the objects on Tracks 1&2 in the order you wish them to appear on the CD
7. If you need to change the order, simply select clips and drag and drop into position. Auto-Ripple and Snap take care of keeping everything together.

Add CD Markers

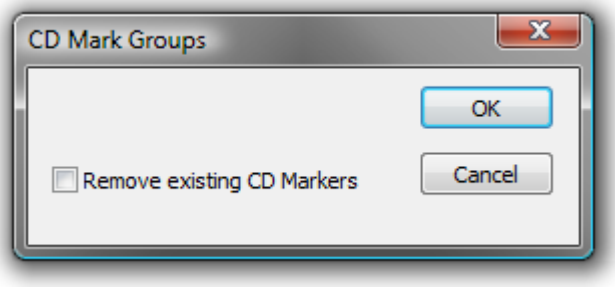
8. Open the **CD/SACD** Tab Window


CD/SACD
Discs Markers Offsets ISRC CD-Text SACD-Text View
Tracks
Name # Pause Start End Length Start Offset Use Off... ISRC
Click here to add a new CD Track
Lost In The Stars - The Music O... 1 00:00:00:00 23:59:56:17 00:06:09:17 00:06:13:00 00:00:00:00 No
On And On_Traffic In The Sky * 2 00:00:00:00 00:06:09:17 00:09:00:13 00:02:50:71 00:00:00:00 No
The Best Of The Rock Machine ... 3 00:00:00:00 00:09:00:13 00:09:12:27 00:00:12:14 00:00:00:00 No
Rumours_The Chain * 4 00:00:00:00 00:09:12:27 00:13:04:25 00:03:51:73 00:00:00:00 No
The Best Of The Rock Machine ... 5 00:00:00:00 00:13:04:25 00:16:24:15 00:03:19:65 00:00:00:00 No
This Is Hardcore_This Is Hardco... 6 00:00:00:00 00:16:24:15 00:16:36:29 00:00:12:14 00:00:00:00 No
Rum, Sodomy, and the Lash_Th... 7 00:00:00:00 00:16:36:29 00:16:40:29 00:00:04:00 00:00:00:00 No
This Is Hardcore_This Is Hardco... 8 00:05:15:29 00:21:55:58 00:22:49:64 00:00:54:06 00:00:00:00 No
Sing Brother Sing_Freedom * 9 00:00:00:00 00:22:49:64 00:26:03:49 00:03:13:60 00:00:00:00 No
Sublime_Santeria * 10 00:00:00:00 00:26:03:49 00:29:06:65 00:03:03:16 00:00:00:00 No
This Is Hardcore_This Is Hardco... 11 00:07:24:56 00:36:31:46 00:37:25:30 00:00:53:59 00:00:00:00 No
CD Album
Black Album
<New Disc>
SACD Album
<New Disc>
Tree Info Track Inspector
General Info
Disc Title > Black Album
Label >
Date > 18 August 2010
Customer Name > Moribund Music
Customer Contact > Solly Jecko
Customer Phone >
PQ Markers
Name # Type
Click here to add a new ...
Lost In The Stars - The ... 1 Start
On And On_Traffic In T... 2 Start
The Best Of The Rock M... 3 Start
Rumours_The Chain * 4 Start
The Best Of The Rock M... 5 Start
This Is Hardcore_This Is ... 6 Start
Rum, Sodomy, and the ... 7 Start
Rum, Sodomy, and the ... 7 Stop

CD/SACD Tab Window

9. Double-click **<New Disc>** in the Album tab.
10. Type a name for the CD

11. Select **CD Mark Groups** from the **Markers** menu to add CD Start Markers to each clip with a CD End Marker at the end of the last clip.

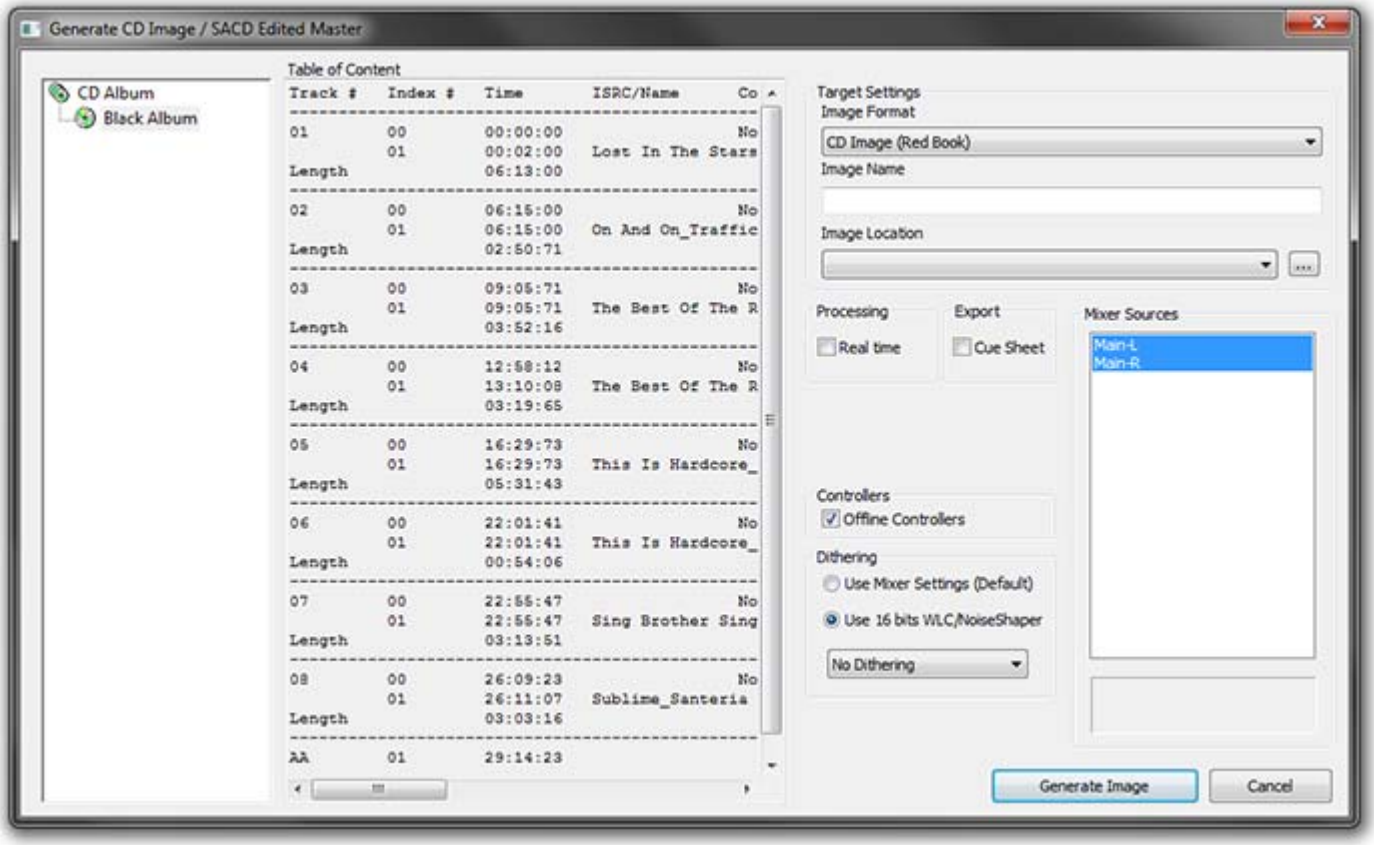


CD Mark Groups dialog

12. If you wish to change any details of the track titles, type in the fields in the right-hand pane.
13. If you want a pause between tracks, type the value in the **Pause** field for each track after the first one. (Use copy & paste if all pauses are to be the same.)

Generate CD Image

14. Choose **Project > Generate CD Image / SACD Edited Master**

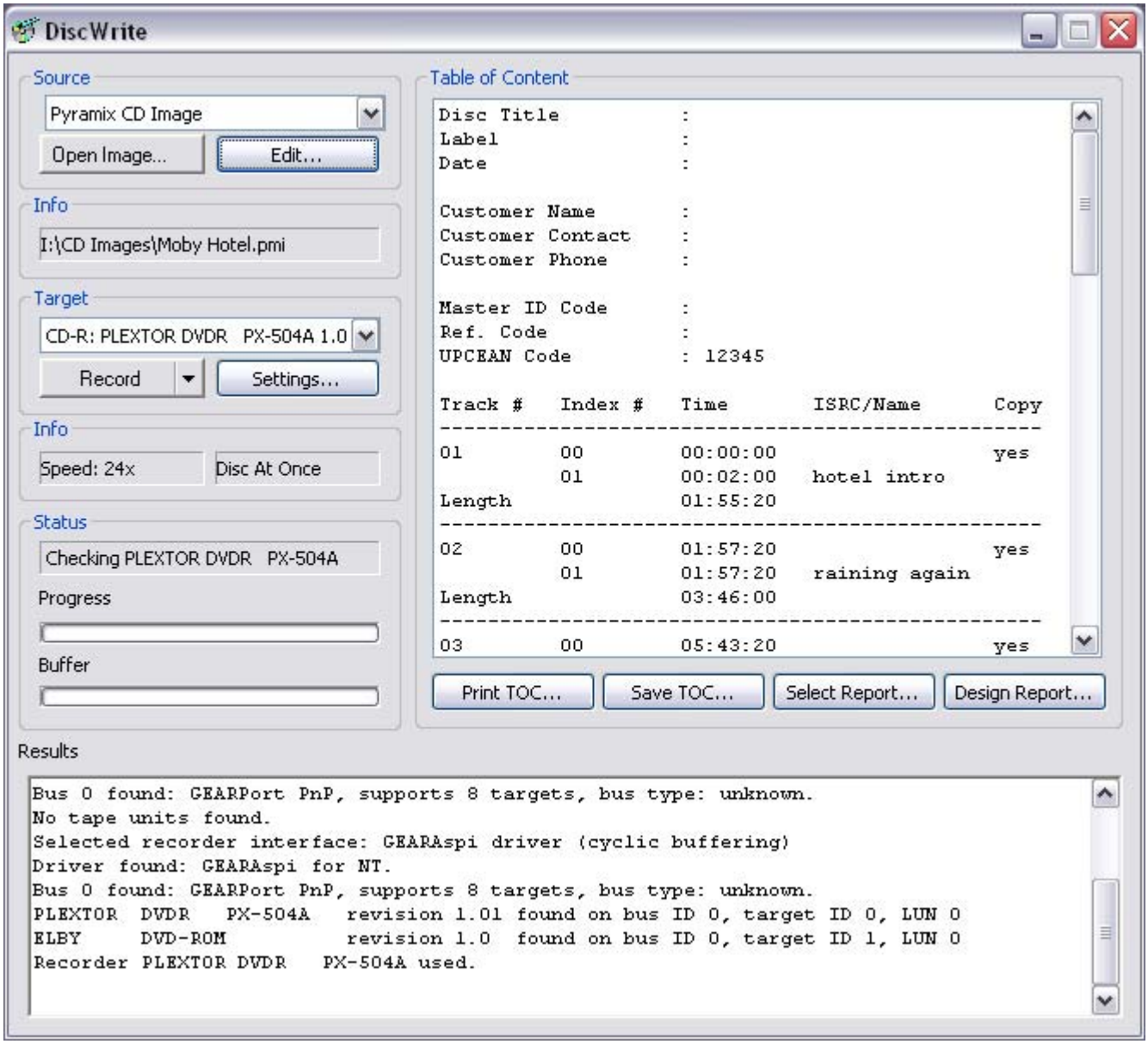


Generate CD Image dialog

15. Type a name for the Disc image
16. Choose a location for the Image
17. Click on **Generate Image**

Burn the CD

18. Open the DiscWrite application. **Start > All Programs > Pyramix > DiscWrite**



DiscWrite Application Window

19. Click **Open Image** and open the Image file you've just created.

20. Select the CD-Writer from the **Target** list.

21. If the Info box does not show **Disk At Once**, click on **Target** : **Settings....**

22. Change the **CD Write Method** entry to **Disk At Once**

23. Click on the **OK** button to close the **Settings** window.

24. Place a blank CD-R in the drive.

25. Click on **Record** to burn the CD

CD Markers

CD Markers are much like other User Flags or Markers. To set a **CD Start Marker** (which indicates the beginning of a CD track), place the Play Head at an appropriate CD track Start location and choose **Cursors & Marks/Add CD Start Marker to Play Head**; similarly, to set a **CD Stop Marker** (which indicates the ending of a CD track), place the Play Head at the appropriate CD track End location and choose **Cursors & Marks/Add CD Stop Marker to Play Head**. A named **CD Index Marker** can also be added using **Cursors & Marks/Add CD Index Marker to Play**

Head. These CD Markers can be examined, named and changed in the Project Management Panel's Markers Tab (just as can regular User Markers).

In addition, CD track Start and Stop Markers can be added automatically to Grouped Clips in a Composition. To accomplish this, first make appropriate Groups of Clips which correspond to CD tracks. Then choose **Cursors & Marks > CD Mark Group**s from the Toolbar. There is only one option, **Remove existing CD Markers**.

Exporting Projects to CD Image Files

To generate a CD from Pyramix you first generate a CD image file. This image file is used with the DiscWrite application to generate CD or DDP. To export a previously Marked Composition to a CD-R image file:

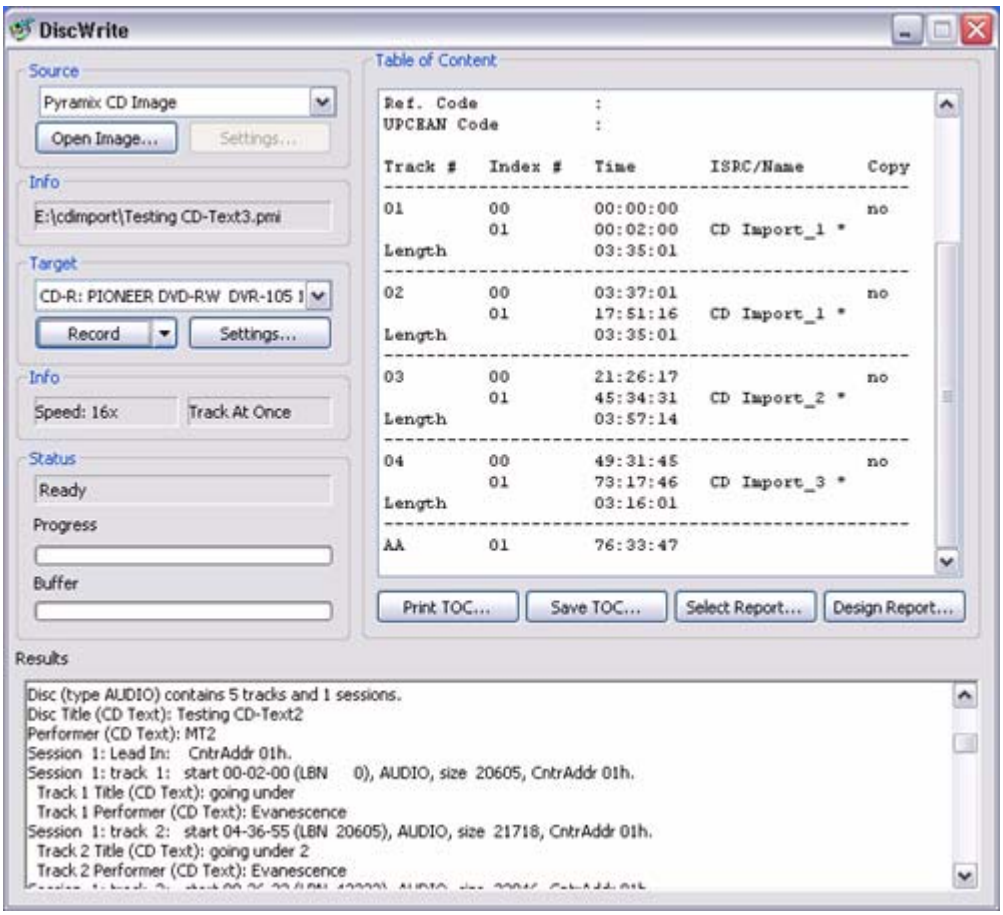
1. Open the **CD** Tab window.
2. Double-click **<New Disc>** in the Album tab.
3. Type a name for the CD
4. Fill in all CD-R information as appropriate. Choose **Project** > **Generate CD Image** from the Toolbar. This opens the **Generate CD Image** window.
5. Choose an appropriate Image name and location for the file, make any other appropriate changes to the settings then click the **Generate Image** button.

You can use the DDP import function in pyramix to import your DDP tape or file and generate a new CD image file. From this CD image file you can burn a CD or generate a new DDP tape.

Burning a CD-R

DiscWrite is a separate application bundled with Pyramix Virtual Studio that is used to write the CD-R (or DDP) image file out to a CD-R disc (or DDP tape) unit. To burn a CD-R from a CD image file created above:

1. Launch **DiscWrite**. A normal Pyramix Virtual Studio installation will put a **DiscWrite** icon on the Desktop.



DiscWrite application window

2. In the **Image** section, click the **Open Image...** button, then navigate to and select a previously created CD Image file (an .**img** file).
3. In the **Device** section, click in the pop-up register to select a CD-R device. **DiscWrite** should recognize a previously configured CD-R device which is also recognized by the OS itself.
4. Also in the **Device** section, click on the **Settings...** button to open the **CD-R Settings** window. Set these as desired for the CD-R burning session. Please see the **Pyramix Reference Guide** for complete explanations of all these settings.
5. When all CD-R settings are adjusted as needed, click the **Burn** button in the **Image** section to actually burn the CD-R.

Red Book Compatible Masters

If the CD-R is to be used as a “Red Book” compatible master "**Disc at Once**" **MUST** be selected.

CD Copy

Where suitable hardware is available, a CD may be directly copied by selecting a CD-ROM drive as the source and a CD-R/RW drive as the destination.

TOCs

Print TOC... prints the current TOC in the currently selected report format.

Save TOC... opens a file save dialog to save the current TOC as a text (.txt) file.

Select Report... opens a file open dialog. Any previously designed TOC report format (*.lst) may be loaded**.**

Design Report... Opens the **Report Designer**. Please see the on-line documentation.

Customizing the User Interface

Pyramix Virtual Studio allows considerable customization of the user interface. Apart from the usual Windows interface possibilities Pyramix has user defined **Workspaces**, customizable **Keyboard Shortcuts** and user defined **Macros**.

Workspaces

Workspaces are a method of saving many of the Pyramix Project Editing Panel settings, especially **Track Header** switches. Once saved a Workspace can be quickly recalled for future use.

Workspaces can be accessed via the pull down menu on the Pyramix Virtual Studio Window toolbar or via the Project Management panel tab.

New Workspaces can be added by clicking 'Click here to add a new Workspace' on the first line of the Tab Window. A text entry box opens where you type a name for the new Workspace. Hitting **Return** places the new Workspace at the bottom of the list.

Workspaces may be re-named by clicking the name.

Workspaces can be deleted by selecting them and pressing the 'Delete' key.

Applying a Workspace is done by double-clicking on the Workspace icon to the left of the name.or select **Workspaces > Recall > Recall Workspace (X)**

Parameters remembered by Workspaces are selectable per Workspace by clicking in the appropriate columns.

If the 'Update on change' column is set to 'Yes'. The current state of all selected parameters is saved to the current Workspace when another Workspace is selected.

Keyboard Shortcuts

We strongly encourage you to learn the default Pyramix keyboard shortcuts. These have been used by audio professionals for over a decade, and are powerful, quick and efficient for audio editing and device control. However, if you are already familiar with another style of audio or video editing, you may wish to create your own **Keyboard Shortcuts** for various Pyramix transport and editing functions.

To define your own **Keyboard Shortcuts**:

1. Choose **View** > **Customize** > **Keyboard Shortcut Editor**. This opens the **Keyboard Shortcut Editor** window.
2. All menu **Commands** are grouped together into **Tabs** within this window. Select the **Tab** with whichever group of **Command** Functions you wish to add or change key assignments for.
3. Click on the appropriate **Command** so that it is highlighted.
4. Click in the **Press new shortcut key** box. The cursor will become a blinking bar.
5. Now press the desired **Key** or combination of **Key** and modifier (e.g. the **Ctrl**, **Shift**, **Alt**, etc.). These will appear in the **Press new shortcut key** box. Note that Pyramix will warn you if the chosen **Key** or combination is already assigned to another function.
6. Click the **Assign** button.
7. Continue assigning **Keys** to **Commands** until you are satisfied.
8. Any set of user defined **Keyboard Shortcuts** can be saved as a **Preset**. To do so, click the **Save Preset** button, then name the **Preset**. Similarly, to recall a previously saved **Preset**, click in the **Presets** box and select it from the pop-up list. Note that several common **Presets** are shipped with **Pyramix Virtual Studio**.The Table will be saved in the system for the user currently logged in and will not affect any other user.
9. A table can be Saved or Loaded to a file so it can be taken to an other system. Just Click on the Save Table or Load Table button.

10. A table can be exported as a Text File along with some comments about commands. This is very useful since it enables you to print it as a command reference guide with your own keyboard shortcuts.

User Macros

Macros are sequences of commands which can be invoked by a single keypress or combination. Macros can be a very powerful aid to productivity.

To define a new **Macro**:

1. Choose **View** > **Customize** > **Macros** from the **Toolbar**. This opens the **Macros** window.
2. Click the **New Macro** button, then name the Macro.
3. Various menu **Command** functions are grouped together into **Tabs**. Select the **Tab** with whichever group of **Command** Functions you wish to add to the Macro.
4. Click on the appropriate **Command** so that it is highlighted.
5. Press the **<<** button to add this command to the **Macro**.
6. Repeat steps **3** to **5** to assign further **Commands** to the **Macro** until it is complete.

A Keyboard Shortcut can now call the new Macro. Follow the instructions in the previous section for assigning Keyboard Shortcuts. In this case, choose the Macro Tab within the Keyboard Shortcut window. Your new Macro will appear as an option inside this window

Appendix I Mouse Modifier Keys

This table shows the valid modifier keys which can be used in conjunction with some mouse operations

Main Editor

Left Mouse Button

Click In the TimeCode Scale

Set Cursor to the mouse	None
Set Mark In to the mouse	Shift
Set Mark Out to the mouse	Ctrl
Set New Marker to the mouse	Ctrl + Shift

Click In the Bars & Beats Scale

Set Cursor to the mouse	None
Adjust tempo to the end	Shift
Adjust tempo for the current portion	Ctrl
Adjust tempo for the current Beat	Ctrl + Shift

Click In the Tempo Map

Create a new tempo portion	Ctrl

Click In the Track headers zone

Repeat action for the same button on all tracks	Shift

Click In the Clips zone (anywhere)

Draw a region to zoom in	Alt
Dyna-Zoom	Z
Draw a region to select	None
Draw a region to select clips completely	Shift
Extend/Reduce the current region to this track	E
Invert No Selection mode for Track Groups	Q
Invert Auto Select Tracks	Q

Click In a Clip handle

Move only the clip handle under the mouse (no groups)	Shift
Move only the envelope point under the mouse (no groups)	Shift

Click In a Clip

Add remove clips to the selection	Shift
Drag the selection (to a library)	Shift + Alt
Move selected clips	None
Move selected clips with auto-crossfade	Ctrl
Slide the underlying media of a clip	Ctrl + Shift
Slide a clip over its underlying media	Ctrl + Alt
Move selected clips constrained in time	Ctrl + Shift + Alt
Cutter	C
Duplicate clip	D
Duplicate clip constrained in time	F

While moving

Auto-crossfade while moving clips	Ctrl
Force crossfade while moving clips lower handle	Ctrl
Detach crossfade while moving clips middle handle	Ctrl
Don't merge Envelope points	Ctrl
Constrain Envelope in time	V
Constrain Envelope in value	H
Don't merge Automation points	Ctrl
Constrain Automation in time	V
Constrain Automation in value	H
Select only what is under the mouse (no groups)	Shift
Select all tracks	Ctrl + Shift
Select and limit selection the clips boundaries	Ctrl + Alt
Snap Sync Point	S
Snap Head	H
Snap Tail	T
Audition while moving (Scrubbing)	A

Double-click in a Clip

Selection Properties	
Clip Properties	Ctrl

Double-click in a fade

Edit the fade in the Fade Editor

Double-click in an envelope point

Reset the envelope point	
Reset only the envelope point under the mouse (no groups)	Shift

Middle Mouse Button

Edit crossfade	Ctrl
Create & Edit crossfade	Ctrl + Shift
Select between edits	None
Enlarge selection between edits	Shift

Click In the TimeCode Scale

Scrub Audio	None

Mouse Scroller

Scroll tracks up and down	None
Increase / Decrease Track height	Shift
Zoom	Alt
Scroll horizontal	Ctrl

Right Mouse Button

Contextual Menu	None
Clip Gain	Ctrl

On dropping a fade or crossfade from a library

Apply to whole group	Shift

Overview

Left Mouse Button

Draw a region to zoom in	Alt
Drag the current composition (to a library)	Shift + Alt

Notes

Left Mouse Button

Drag the notes (to a library)	Shift + Alt

Media Folder

Left Mouse Button

Replace media for target clip(s)	Ctrl

Appendix II I/O Daughter-card Options

ADAT Optical I/O

The ADAT Optical daughter card offers 16 channels of audio input and 16 channels of audio output, 8 channels per optical connection. From top to bottom of the card, it has two digital optical input connectors (Inputs A and B) and two digital optical output connectors (Outputs A and B).

The signal format of optical connectors Input A and Output A can be set inside the Pyramix software to operate in either ADAT or S/PDIF mode. When in ADAT mode, there are 8 discrete audio channels carried per each optical connector. S/PDIF mode has 2 channels per optical connector.

> **Note:** in SPDIF mode the maximum sampling rate is limited to 48 kHz. Please also note that whilst the ADAT daughterboard continues to function normally in HDTDM (64 bus) mode it cannot be used for input when in XDTDM (128 bus) mode and is then only capable of 8 outputs via Optical Output A with the same 8 duplicated on Optical Output B.

WARNING! The **ADAT** Daughterboard requires modification before use with XDTDM mode. Failure to do this may result in data loss. Please contact your Merging Technologies Sales Partner to arrange a mod.

AES/EBU I/O

The AES/EBU daughter card offers 24 channels of I/O over 12 AES/EBU input and output pairs. Connection is via three DB-25 connectors, One on the main card attached to the **Mykerinos** and two more on a separate bracket connected via internal ribbon cable to the main card. An optional break-out cable can be ordered separately which connects to the DB-25 connector and terminates in 8 XLR connectors which may be used to connect to standard AES/EBU stereo inputs and outputs. AES daughter cards are available with or without 8 channels of SRC (sample rate conversion)

Dual DC I/O

The Dual DC offers up to 12 inputs and outputs at 32kHz, 44.1kHz or 48kHz sampling rates on a single board. All converters are 24 bit. Connection is via 2 DB-25 connectors. One, on the main card attached to the **Mykerinos**, carries the analog I/O and the second, on a separate bracket, carries four AES/EBU Input and Output stereo pairs. There are four analogue Line outputs and four analogue Line Inputs, two of which may be switched to accept Mic or Line level inputs. These have Mic pre-amps and 48V phantom powering. The analogue Line level I/O is adjustable over a 24dB range to accommodate all standard studio levels. Optional break-out cables can be ordered separately which connect to the DB-25 connectors and terminate in 8 XLR connectors.

The Dual DC is the most cost-effective I/O daughter card for Pyramix users. It is an ideal I/O solution for mixed analog/digital requirements, as encountered in Broadcast production, and Video post-production environments. It allows direct connection of up to two dynamic or condenser microphones, typically for quick and easy voice-over recording.

> **Note:** the Dual DC I/O daughtercard is not HDTDM bus compatible and can not be used in a multiboard setup.

MADI I/O

The MADI daughter card offers 56 channels of 24 bit bi-directional I/O, and up to 64 channels in MADI-X (MADI Extended) format. It can be ordered either in a BNC coaxial version or an optical duplex SC version. Both versions are fitted with a standard Wordclock BNC I/O connector, which can be programmed in the Pyramix software as a Wordclock In or Out signal.

SDIF I/O

The Mykerinos SDIF daughter board is specially designed for multi-track DSD recording. It offers 8 channels of DSD digital input over 8 unbalanced, 75 Ohm terminated BNC connectors and 8 channels of DSD digital output over 8 unbalanced, 75 Ohm BNC connectors.One channel of DSD signal is transported at the bit-rate of 2.82 MHz through each BNC connector. SDIF-2 and SDIF-3 format are fully supported for DSD transport (selected under software control)

With one Mykerinos board, it is only possible to use one DSD Input and Output channel. To have the full range of 8 I/O channels, a second Mykerinos board is required to provide sufficient DSP power.

TASCAM TDIF

The TASCAM TDIF daughter card offers 24 channels of I/O over 3 Tascam TDIF connections. Connection is via three DB-25 connectors, One on the main card attached to the Mykerinos and two more on a separate bracket connected via internal ribbon cable to the main card.

TASCAM TDIF I/O Option

A TASCAM TDIF format option bracket may be added to the ADAT I/O daughtercard and provides is available for 8 channels of TDIF I/O. The TDIF bracket connects to a socket on the ADAT card only. This daughter card cannot be used in multi-board systems (since it utilizes the HTDM connector).

Quickstart Guide : Index

Index

A

Adding Plug-ins 55
Adding Strips 54
Archiving Projects 67
ASIO 17
Audio Connections 12
Audio I/O Options 11
Automation in libraries 22
Aux Bus 54

B

Basic Strip 51
Before Recording 27
Burning a CD-R 72
Bus Tools 66
Buttons 51

C

CD Mastering 67
Changing or re-entering a Key 15
Check Sync 27
Clip Handles 41
Clips 20, 40
Compositions 40
Connect Physical I/O to Logical I/O 23
Context Menus 18
Conventions 8
Copy 43
Copy and Paste 40
Creating and Configuring Mixers 52
Cursor & Timescale Ruler Toolbars 45
Cursor Toolbar 45
Customizing the User Interface 73
Cut 43
Cut and Ripple 43

D

Default Clock Source 27
Default Library 22
Delay 51
Digital Audio Synchronization and TimeCode 12
Direct Output 51
Do you want to save routing? 16
Driver Signing 14
Duplicate Selection 42

E

Edit Audio 29
Edit Command highlights 42
Editing 41
Enabling Pyramix 15
Entering Keys 15
Export to a File 67
Exporting Projects to CD Image Files 71
External Audio D/A-A/D Converter Boxes 11
External Effects 54

F

F.FWD and REW nominal speed ratio 48
Fade In 42
Fade Out 42
Fader 51
Fades 42
Fast Speed Settings 48
Fill Selection 43
First launch
    Multi-board system 16
Fit Selection 43
Fixed or Moving Playhead Cursor 44
Flywheel Inertia 47

G

Global Libraries 22
Grouping Clips 41
Groups 52

H

Hard Disk Space Requirements 10
HDTDM 11

I

I/O Assignments 55
I/O Busses 52
I/O Status Window 27
Import Key 15
Input Assignment 51
Input Strips 52
Insert Silence 43
Installing Pyramix 13
Internal Return Busses 52
Introduction 7

J

Jog / Shuttle 47
Jog Settings 47
Jog Shuttle
    Auto Jog 47
Jog Wheel Sensitivity 47
Joystick Panner 56

K

Keyboard Shortcuts 73

L

Loop Selection 43

M

Macros 18, 74
Markers or User Flags 50
MassCore 9
Master Clips 20
Media Drives 20
Media Files 20
Media Folders 20
Meter Bridge 19
MIDI Connections 13
Mix Bus 52
Mixer Components 51
Mixer Strip Plug-in Controls 55
Mixer Surround Components 56
Mixing Down Projects 67
Mixing/Monitoring/Aux Buses 52
Monitor 19
Mono Mix 52
Mouse Modifier Keys 18, 75
Mouse Scrubbing Settings 48
Moving a Clip 41
MT Security Settings 15
Multi-board installation 11
Multiple Mix Busses 53
Mykerinos 11
Mykerinos Back-plate 12
Mykerinos Board Installation 10

N

Native 8
Native Plug-ins 55
Navigation 43
New Project 30
New Project from scratch 30
New Users 23

O

Offline / Reference Libraries 22
On-board Analog Audio I/O 11
Open a New Project 24
Operating System 10
Other Applications 10
Overview 50

P

Paste 43
Paste & Place 43
Paste and Ripple 43
Paste Sync Point to Cursor 43
Paste Tail to Cursor 43
Paste to Cursor 43
Paste to Cursor and Ripple 43
Paste to Original TC 43
Paste to Selection 43
Play Head Position 43
Position/Speaker Control 57
Power Management 10
Program and Project Settings 34
PS3 52
Pyramix documentation and Help 7
Pyramix Native 9
Pyramix Turnkey 8
Pyramix Versions 8
Pyramix Virtual Studio Board I/O 11
Pyramix Virtual Studio Window Orientation 33

Q

Quick CD 67

R

Record and Playback Audio 27
Recording 36
Removing Strips 54
Replace Selection 43
Rewire 17
Rotary Controls 51
Routing Tracks to/from the Mixer 39
Running the Installer 14

S

Sampling Rate Mismatch 27
Scroll Wheel 49
Scrub
- Analog Tape Mode 48
- Middle Mouse button 47
- Repeat Loop Mode 48

Scrub Audio Quality 48
Scrub Settings 48
Selecting a Clip 41
Selecting a Range 41
Settings 36
Show / Hide 51
Shuttle 47
Shuttle sensitivity 47
Silent Jog - sensitivity 47
Simple Project 23
Software Key 15
Splitting Clips 41
Starting Pyramix 17
Stereo Input Strips 56

Stereo Mix 53
Strip and Bus Tools 57
Strips/Tracks - Synchronized Creation/Deletion 54
Sub Level 56
Support 7
Surround Bus select 56
Surround Components (Mixer) 56
Surround Control 56
Surround Control window 57
Surround Mix - 5.1 53
Surround Panning Algorithm 57
Sync, Video and Time Code Connections 13
Synchronized Creation/Deletion of Tracks/Strips 54
System Requirements 9

T

TASCAM TDIF I/O Option 79
Time Code and Video Sync Option 11
TimeCode
    Increment / Decrement UP & DOWN Arrow Buttons 45
TimeCode Scale 44
Timeline 39
TOC 72
Tracks 39
    Adding and Deleting Tracks 39
Tracks/Strips - Creation/Deletion - Synchronized 54
Transport Controls 48

U

User Interface 18
User Libraries 21

V

Vari Speed Audio Quality 48
Video and Pyramix on one PC 10
Virtual Multi-track 37
VS3 control panel 16
VST Plug-ins 55

W

Workspaces 73

Y

YourPersonalKey 15

Z

Zooming and Panning 49